

Undergraduate/Graduate Catalogue

1981-1982



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BRIDGEWATER STATE COLLEGE
BRIDGEWATER, MASSACHUSETTS 02324

Proudly Serving Public Higher Education in the Commonwealth of Massachusetts

**BRIDGEWATER
STATE
COLLEGE**

Accreditation and Approval

The New England Association
of Schools and Colleges, Inc.

The National Council for the
Accreditation of Teacher Education

The American Chemical Society

The Interstate Certification Compact

Memberships and Associations

The American Association of
State Colleges and Universities

The American Association of
Colleges for Teacher Education

The Council of Graduate Schools
in the United States

The New England Conference
on Graduate Education

The Association of Graduate Deans
of Northeastern State Colleges

SACHEM (Southeastern Association for
Cooperation in Higher Education in Massachusetts)

Massachusetts System of
Public Higher Education Institutions

This Catalogue is a guide for information only and not a contract. The College reserves the right to change requirements for degrees, prerequisites, fees, scheduling, and related matters. Every effort is made to implement such changes in such a way that any new curricular requirements will work no hardship on a student who has entered under an earlier set of requirements.



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81/82

Undergraduate/ Graduate Catalogue

**Behavioral Sciences
Humanities and Creative Arts
Natural Sciences and Mathematics
Professional Education
Social Sciences
Multidisciplinary and
Pre-Professional Programs**

CALENDAR OF THE

(See the Fall, Spring and Summer brochures of

S M T W Th F S

September

1 2 3 4 5
6 7 8 9 10 11 12
13 14 15 16 17 18 19
20 21 22 23 24 25 26
27 28 29 30

October

1 2 3
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11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28 29 30 31

November

1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30

December

1 2 3 4 5
6 7 8 9 10 11 12
13 14 15 16 17 18 19
20 21 22 23 24 25 26
27 28 29 30 31

FIRST SEMESTER — 1981

September

8 (Tuesday) Orientation.
9 (Wednesday) Classes begin at 8:00 a.m.
22 (Tuesday) Fall Convocation — 11:00 a.m.
Last day to drop/add courses
for First Semester.
25 (Friday) Last day for graduate students
to file request for the November
Comprehensive Examinations.

October

1 (Thursday) Last day for receiving
completed master's degree and CAGS applications
for November admissions.
12 (Monday) Columbus Day - no classes.
13 (Tuesday) Monday schedule of classes.
23 (Friday) End of First Quarter -
non-professional education programs.
30 (Friday) End of First Quarter -
professional education programs.

November

1-30 Graduate Comprehensive Examinations.
2 (Monday) Last day for undergraduate
and graduate students who expect to receive
their degree in February
to file the appropriate degree
application form.
11 (Wednesday) Veterans Day - no classes.
19, 20, 23, 24 Registration for Second Semester.
25 (Wednesday) Thanksgiving Recess begin
at close of classes.
30 (Monday) Classes resume at 8:00 a.m.

December

1 (Tuesday) Last day for undergraduates
who expect to receive their degree in May
to file degree application form.
Last day to withdraw from
semester courses.
4 (Friday) Last day for graduate students
who anticipate the completion of degree work
in May to file the Petition for Acceptance
of Transfer Credit.
16 (Wednesday) First Semester Classes end.
17 (Thursday) First Semester Examinations begin.
24 (Thursday) First Semester Examinations end.

ACADEMIC YEAR 1981-1982

Program of Continuing Education for its calendar)

SECOND SEMESTER — 1982

- January
- 18 (Monday) Classes begin at 8:00 a.m.
 - 29 (Friday) Last day to drop/add courses for Second Semester.
- February
- 5 (Friday) Last day for graduate students who expect to receive their degree in May to file the appropriate degree application forms; Last day for graduate students to file request for April Comprehensive Examinations.
 - 15 (Monday) Washington's Birthday - no classes.
 - 16 (Tuesday) Monday schedule of classes.
- March
- 12 (Friday) End of Third Quarter. Spring Recess begins at close of classes.
 - 29 (Monday) Classes resume at 8:00 a.m.
 - 31 (Wednesday) Last day for receiving completed master's degree and CAGS applications for May admissions.
- April
- 1-30 Graduate Comprehensive Examinations.
 - 9 (Friday) No classes scheduled.
 - 19 (Monday) Patriot's Day - no classes.
 - 23 (Friday) Last day to withdraw from semester courses.
 - 27, 28, 29 Registration for First Semester, 1982.
- May
- 7 (Friday) Last day for graduate students who expect to receive their degree in August to file the appropriate degree application form; Last day for graduate students who anticipate the completion of degree work in August to file the Petition for Acceptance of Transfer Credit.
 - 18 (Tuesday) Second Semester Classes end.
 - 19 (Wednesday) Reading Day — no classes.
 - 20 (Thursday) Second Semester Examinations begin.
 - 28 (Friday) Second Semester Examinations end.
 - 29 (Saturday) Commencement.
- June
- 1 (Tuesday) Last day for undergraduates who expect to receive their degree in August to file the appropriate degree application form.

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January						
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31						
February						
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March						
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April						
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May						
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30	31					

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General Information



NATURE, PURPOSE, AND DISTINCTIVE CHARACTERISTICS OF BRIDGEWATER STATE COLLEGE

Bridgewater State College is a Comprehensive College which provides basic education in the Arts and Sciences as well as preparation for various professional careers in service and technical areas. The primary mission of the College is to offer access to the citizens of the Commonwealth, including those of low and moderate income, to quality programs of higher education to enable them to explore, enter into, and to advance in careers in the professions, government, and business and industry, including the expanding High Technology sector. To help fulfill this primary mission, the College offers over 100 academic programs and areas of study.

In this way the College serves the economic and cultural needs of the individual and the State, particularly the Southeastern region with a population of over a million persons in its cities and suburban and rural areas.

At the undergraduate level, Bridgewater offers major programs in five broad areas of knowledge: Behavioral Sciences, Humanities and Creative Arts, Natural Sciences and Mathematics, Professional Education, and Social Sciences. Within these broad areas of knowledge the College has been responsive to the changing needs of both students and society. Thus, new majors have recently been added in Computer Science, Aviation Science, Management Science, and Social Work. An additional new major in Nursing is in the planning stages.

Bridgewater also provides graduate programs in the five areas of knowledge at the Master's Degree and Certificate of Advanced Graduate Study (CAGS) levels. This fall a new Master of Arts in Speech Communication has been introduced, and M.A. programs in Psychology and in Sociology await final approval of the Board of Regents.

The Program of Graduate and Continuing Education makes available a host of Graduate, Undergraduate, Certificate, and Community Service programs to the thousands of students who attend Bridgewater on a part-time basis during the fall and spring semesters and during two consecutive summer sessions. In addition to the conventional disciplines in the Arts and Sciences, Certificate Programs are offered in Accounting, Advertising, Computer Science, Investments & Financial Planning, Paralegal Studies, and Retail Management.

For 141 years Bridgewater State College has been the educational, cultural, and community service center of this region. The unusual spirit

and dedication of its talented faculty and students have enabled Bridgewater to develop extensive linkages with business, industry, education, and local, State, and Federal agencies. Building on a strong tradition of academic excellence and service to the community, the College has moved forward to develop new distinctive characteristics. Among these are:

1. Microprocessing specialization within Computer Science.
2. Aviation Science (with concentrations in *Flight Training* and *Aviation Management*, the first four-year program in a New England public college).
3. Projects in Environmental Studies and Control, such as a cooperative study of the huge Narragansett Coal resources deposit. Also, projects in Horticultural Science, Land Management, and Solar Energy.
4. Canadian Studies. The Government of Canada has recognized the College's special broad competence in this field by designating Bridgewater as an official *Study and Resources Depository of the Canadian Government*.
5. Outstanding drama productions, including the renowned Children's Theatre, which since its inception in 1969 has been seen and enjoyed by 150,000 children throughout Southeastern Massachusetts.
6. Advanced Studies Program for academically talented eighth and ninth grade students from seventeen area communities. This program, now in its fourteenth year, brings to the campus each summer 350 of these gifted young people to participate in a rigorous and challenging six-week academic study project.
7. Cardiovascular and endurance research, carried on in the College's Human Performance Laboratory in cooperation with area hospitals. In similar ways, new approaches in adapting physical education to the improvement of motor skills and coordination of special needs children are being pioneered at Bridgewater through the Children's Physical Developmental Clinic.
8. Cancer Management seminars, offered by the College in cooperation with University Hospital and the Boston University School of Medicine through the Regional Oncology Program.

FACULTY/STUDENT PROFILE

Bridgewater State College is proud of its unusually talented, dedicated faculty. There are approximately 220 full-time faculty members, over 61% of whom hold earned doctorates.

Bridgewater's full-time undergraduate student body numbers approximately 4,250 students, and matriculated graduate students account for more than 1,900. Continuing Education students average over 3,000 per semester. Estimated total annual enrollment in all programs exceeds 12,000.

ACADEMIC PROGRAMS AND AREAS OF STUDY

Bridgewater State College offers twenty-seven undergraduate majors (see "Academic Programs" in the *Undergraduate College* section), thirty-two master's degree programs and the Certificate of Advanced Graduate Study (CAGS) in four concentrations (see "Graduate Programs" in the *Graduate School* section of this Catalogue). In addition, six Certificate Programs are offered through the Program of Graduate and Continuing Education (see below).

THE PROGRAM OF GRADUATE AND CONTINUING EDUCATION

The Program of Graduate and Continuing Education is designed to meet the needs and interests of students with varied experiences and goals. Undergraduate and graduate level courses are offered during the late afternoon, evening, and Saturday mornings. In addition to the Bridgewater campus, there are also Centers at Buzzards Bay (Massachusetts Maritime Academy) and West Barnstable (Cape Cod Community College).

Undergraduate courses are open to all students who hold a high school diploma or its equivalent; graduate courses are open to students holding a bachelor's degree and who meet any necessary prerequisites. Undergraduate majors, such as Aviation Science, Communication Arts and Sciences, Chemistry, French, Health and Physical Education, Philosophy, Physics, Political Science, and Social Work are limited in the number of evening courses offered and it is sometimes necessary for students to spend part of their time in the day session in order to complete the necessary undergraduate degree requirements.

Students may be accepted into Bridgewater State College degree programs only after formal application is made either through the Undergraduate Admissions Office or the Graduate School Office. Once admitted, the student is assigned an advisor who helps plan the student's

program. Students may also take courses through the Program of Graduate and Continuing Education without any commitment to a degree program.

In addition to the undergraduate and graduate degree programs, the Program of Graduate and Continuing Education also offers six Certificate Programs: Accounting, Advertising, Computer Science, Investments and Financial Planning, Paralegal Studies and Retail Management.

Any additional information and assistance may be obtained by contacting the Office of Continuing Education, Maxwell Library, Park Avenue entrance, 697-6141. Office hours are Monday through Thursday from 8:00 a.m.-10:00 p.m.; Friday from 8:00 a.m.-5:00 p.m.; Saturday 8:30 a.m.-12:30 p.m. (8:00 a.m.-5:00 p.m. Monday through Friday when classes are *not* in session.)

OPPORTUNITIES FOR STUDY ABROAD

In recognition of the international dimension of education in our increasingly interdependent world, the College actively supports and encourages students to pursue study abroad which will supplement and complement the course offerings and educational services of the College in a variety of ways. The objective is to contribute to the acquisition of knowledge and understanding of many lands, peoples, and cultures. Most specifically, the objective is to broaden the scope of the preparation of future leaders and citizens so that through such infusion of experience they will be better equipped to deal with transnational problems of the contemporary world.

There are undergraduate and graduate program opportunities available in a number of areas. For additional information, contact Dr. Robert Mogilnicki in the Department of High School, Middle School, and Adult Education, who serves as the International Advisor at Bridgewater.

THE CAMPUS

Bridgewater State College is located in the town of Bridgewater, Massachusetts, approximately 30 miles south of Boston. There are twenty-six buildings on 176 acres of land. The earliest building on campus is the Art and General Classroom Building, constructed in 1904. Within the past decade a number of new buildings have been constructed, including the Student Union Building, the Clement C. Maxwell Library, Student Apartments, and the Martha Burnell Campus School/Academic Classroom Complex. Boyden Hall, the main administration and classroom building, has recently undergone an extensive restoration.

Among the highlights of the campus:

THE CLEMENT C. MAXWELL LIBRARY

This modern four-story building has a capacity of 425,000 books. It is named for Dr. Clement C. Maxwell, Bridgewater president from 1952 to 1962, who believed that "a library is the heart of the college."

The library now has more than 200,000 volumes and subscribes to approximately 1500 periodicals and newspapers. These are supplemented by microfilm and microfiche holdings, including ERIC, a nationwide pooling of information on education and allied social sciences, and HRAF (Human Relations Area Files), a collection of primary source materials on selected cultures or societies representing all major areas of the world. Microfiche reproduction facilities are also available.

A curriculum center for teachers in training and in the field offers a large sampling of current texts and allied materials. Indexes and abstracts are available in specialized areas to support curriculum needs and there is a large reference collection. There is also an extensive collection of young adults' and children's books. Suggestions from faculty and students for new acquisitions are given careful consideration.

In addition to classroom and seminar rooms, the library has a small auditorium, a media center, offices, a conference room, a browsing area and many individual study areas. Dial-access carrels, listening rooms and private study carrels are also available. The Department of Media and Librarianship is housed on the second floor.

Special collections include an extensive children's collection; the Theodore Roosevelt and Horatio Alger collections, both donated by Dr. Jordan Fiore, Division Head (Social Sciences); a 20,000 volume "Library of American Civilization" and a 6,000 volume "Library of English Literature," both on ultra-microfiche; a collection of books by Bridgewater authors and about the college and town of Bridgewater; the Charles Dickens collection;

and a collection of early American textbooks. The library also has an extensive collection of Lincolnia and is a depository for Canadian government documents.

Accessibility to materials is provided through open stacks (some periodicals are in closed stacks) in the library itself; a special interlibrary loan service including Bridgewater, Wheaton College, Southeastern Massachusetts University, Stonehill College, Taunton Public Library, Brockton Public Library and the Veterans' Administration Hospital Library; maintenance of a centralized, divided card catalogue; and the availability at all times of a reference librarian. The WILL program permits students to borrow from any public institution of higher education anywhere in the Commonwealth simply by presenting their student I.D.

The library also subscribes to NELINET/OCLC an on-line system providing cataloguing and interlibrary loan service. This system gives the library access to information about more than 5 million books and other library materials.

THE STUDENT UNION

The Student Union features twenty-seven various types of facilities including: a 1,450 seat auditorium; a cafeteria-in-the-round, student organization offices, various lounges, College bookstore, Rathskeller, radio station, music room, formal dining room, ballroom, and many more facilities.

The Student Union contributes to the educational, cultural, and social experience of students by sponsoring a wide range of events and activities, including concerts, live drama, lectures, movies, mini-courses, and other programs.

MARTHA BURNELL CAMPUS SCHOOL

One of the more recent additions to the College is the Martha Burnell Campus School/Academic Classroom Complex, opened in the fall of 1979. This 116,000 square foot structure houses the campus school in a one-story section and College classrooms and offices in a three-story wing. The Martha Burnell Campus School features a host of sophisticated educational resources and is intended to serve as a magnet school for the Southeastern Massachusetts region for the development of exemplar learning programs.

POLICY ON NON-DISCRIMINATION

As a part of the Massachusetts Public Higher Education System, Bridgewater State College is committed to a policy of non-discrimination and affirmative action in its educational programs, activities and employment practices. It is the policy of the Massachusetts Public Higher Education System not to discriminate on the basis of race, sex, color, national origin, age or religion, or handicap. Bridgewater State College, as part of the Massachusetts Public Higher Education System maintains its policy of non-discrimination and affirmative action in fulfillment of the requirements of Executive Orders 11246 and 11375, Titles IV, VI, VII, IX and X of the Civil Rights Act of 1964 as amended in 1972; Sections 503 and 504 of the Rehabilitation Act of 1973, as amended, Section 402, Vietnam War Veterans Readjustment Assistance Act of 1974 and pertinent Laws, Regulations and Executive Directives of the Commonwealth of Massachusetts, including regulatory procedures set forth by the Board of Regents of Higher Education; and other applicable state and federal statutes.

Mr. Edward J. Meaney, Affirmative Action Officer, may be contacted regarding Bridgewater State College's policy of non-discrimination and affirmative action, including compliance with Section 504 of the Rehabilitation Act of 1973 as amended, in Boyden Hall, Bridgewater State College. Telephone (617) 697-8321, extension 428.

SERVICES TO STUDENTS

Throughout a college career, students are faced with numerous options which involve making adjustments, wise decisions and intelligent plans. Questions and concerns about one's educational program and academic development, housing, finances, health, social activities, part-time work, and post-college study or employment, are explored through mutual interaction with students by sensitive and dedicated professionals involved in the major areas of student development. A wide range of activities is provided to complement and personalize the academic experience for each student.

Members of the Division of Student Services pursue through mutual interaction and interdependence the questions, needs, and alternatives which are of concern to the student. Specific services are provided in the areas of counseling, housing, finances, health, social activities, part-time work, and post-college study or employment.

A primary function of the Office of Student Services is counseling with students. A wide range of counseling services are available. The professional staff is qualified to assist students with academic, personal, social, and career concerns. With the cooperation of the student, referrals to other helping persons and agencies are made when appropriate.

COUNSELING CENTER

A counseling psychologist working within the Office of Student Services is available to take referrals from students, faculty, and administrators and to direct counseling activities. In order that the student may enter into a relationship with the counselors with a basic sense of safety and trust, strict adherence to confidentiality of information is assured. The Counseling Center is located in the Grove Street Building.

CAREER PLANNING AND PLACEMENT

The services of the Career Planning and Placement Office, located in the Student Union, are available to all matriculated students and College alumni. Notices of full and part-time job openings off campus are posted on a bulletin board near the Bookstore in the Student Union and in the Career Planning and Placement Office.

Some of the other services offered include: career counseling, interest testing, workshops related to the job search, graduate and professional school advising, on-campus recruiting, summer employment, internship information, and senior/graduate placement credentials.

The office also contains a great variety of career materials related to all academic programs offered by the College, current and emerging fields, federal and state civil service opportunities, and the many facets of the job search.

HANDICAPPED SERVICES

The Office of Handicapped Student Services provides support services to handicapped students on campus. Do not hesitate to contact the office in person on the first floor of Boyden Hall in the Office of Student Services. Telephone (617) 697-8321, extension 210 or 525. The office is open Monday through Friday from 8:15 a.m. to 4:30 p.m.

HEALTH SERVICES

The Health Services Office is located on the ground floor of Tillinghast Hall. All undergraduate students are required to have a record of a complete entrance physical examination on file. A physician is on duty during various hours throughout the week and registered nurses are on duty 24 hours a day. A gynecological clinic is held every other Tuesday and an orthopedic clinic is conducted once a month in the College Health Service Office. Both clinics are by appointment only. Laboratory service providing most necessary tests is available free of charge to all students.

ORIENTATION

An Orientation Program is held for incoming undergraduates during registration periods. Students are advised on their academic programs and are given opportunities to meet with each other in formal and informal settings. Through discussion groups, campus tours, social activities and the like, new students are exposed to the wide range of persons, activities and resources which constitute the Bridgewater State College Community.

ACADEMIC COUNSELING

An Academic Advisement and Information Center, located in Boyden Hall, is available to assist students in planning their academic programs, in choosing their major or in securing academic counseling in specific problems. Since the College places the primary responsibility for educational progress on the student, it seeks to provide students with many sources of professional assistance. Faculty counselors, departmental advisors and the college professional counselors are available to students with academic problems. This service recognizes the difficulty students may encounter in adjusting to the pace of learning in college with its different type of assignments and demands. Opportunities are provided for the student who is seeking to address his/her problems to know more about self, aptitudes and special interests, while at the same time obtaining professional assistance.

DEVELOPMENTAL SKILLS

A Developmental Skills Program is available to help strengthen those skills most essential to effective learning both in college and throughout life. The program is based on the College's commitment to provide students with every opportunity to correct deficiencies and to build upon strengths they may have. This assistance is provided through specialized courses in English, Mathematics, Reading, Laboratory Assistance in Reading and Writing, as well as tutorial assistance. Students who wish to participate in any aspect of the Developmental Skills Program should consult with their faculty advisor or the coordinator of the Developmental Skills Program, Dr. Edmund Haughey, for further information.

Courses — Students may enroll in the following courses through regular registration procedures.

English 100 — The course will consist of an intensive review of basic communication skills, chiefly those of reading and writing. Students who wish further information about this course should consult with Dr. Charles Angell of the English Department.

Mathematics 100 — The course will provide students with the opportunity to improve computational skills in arithmetic and elementary algebra. Students who wish further information about this course should consult with Dr. Murray Abramson of the Mathematics Department.

EE 100 Effective Reading — A course dealing with efficient and effective approaches to reading and studying skills at the college level. Students who wish further information about this course should consult with Dr. Peter Bizinkauskas.

Laboratories — Students may enroll in the following laboratory programs by consulting with the directors of the program.

Reading Laboratory — The College Reading Laboratory is available to all students who wish to utilize the services of the Laboratory for the development of their own skills. Students interested in the services of the Laboratory may contact Dr. Peter Bizinkauskas, College Reading Laboratory, Maxwell Library.

Writing Laboratory — The Writing Center at Bridgewater State College offers the student an opportunity for individualized instruction in writing. Student participation at the Writing Center may be voluntary or by referral to Dr. Charles Angell of the English Department.

Tutorial Assistance — A tutoring service is available as part of the program in Developmental Skills. Students who need this help are encouraged to call the coordinator, Ms. Doris AuCoin, in the PROGRESS Office in Tillinghast Hall.

VETERANS AFFAIRS

This office offers services in the areas of general information on the current G.I. Bill, counseling, educational guidance and assistance in job opportunities. It provides direct contact between the veteran and the Veterans Administration Regional Office in Boston or Providence.

Those students who may be eligible for educational benefits are: Veterans of the Vietnam era; who have ten (10) years from date of discharge from active duty in which to use their G.I. Bill eligibility, and those who have fifteen (15) years from the date of discharge from active duty in which to use their Massachusetts tuition exemption; orphans, wives, widows, and widowers of veterans whose death or permanent total disabilities were service connected; wives and children of servicemen missing in action or prisoners of war, for more than 90 days.

For further information, contact Ms. Nancy Clay, Veterans Affairs Officer, Boyden Hall.

INSURANCE

The Student Health/Accident Insurance Plan provides 24-hour coverage anywhere in the world for the twelve-month period beginning September 1. This plan is optional for all Bridgewater State College students. Detailed information on the College plan is available from the College Health Service.

The College does not carry insurance which will compensate students or their families for losses suffered on campus because of fire, theft, water damage, etc. It is advisable to check the extent of current home insurance or to seek coverage through a special policy.

SOCIAL AND CULTURAL EVENTS

A wide variety of activities is sponsored by college and student organizations to meet the many different needs and interests of the college community. Through formal and informal activities, plays, recitals, exhibits, concerts, dances, forums, speakers and off-campus trips, opportunities for enrichment are everpresent. Such activities help students develop understandings and skills that enrich and extend classroom learnings and form an integral part of the college program.

ATHLETICS

The Department of Health, Physical Education, and Recreation provides a wide range of intercollegiate, intramural and recreational activities for men and women. The objectives of the programs are to promote qualities of leadership and sportsmanship; enhance emotional

and social development and provide opportunities for the development of physical skills.

Intercollegiate athletics play an important part of life on the College campus. They provide for a high level of competition with other colleges in the eastern part of the United States. Among the intercollegiate sports offered are: baseball, basketball, cross country, football, golf, swimming, tennis, track, field hockey, softball, lacrosse, soccer, and volleyball. The College is a member of the National Collegiate Athletic Association, the National Association of Intercollegiate Athletics, the Massachusetts State College Athletics Conference, the Eastern College Athletic Conference and the National, Eastern and Massachusetts Associations for Intercollegiate Athletics for Women.

RECREATION PROGRAMS

The intramural program provides competitive experiences in a variety of team and individual sports and includes modern dance, swimming, and gymnastic clubs.

The recreation program provides many opportunities for social involvement. Some of the highlights of the program include mountain climbing, camping, biking and skiing trips as well as many seasonal activities.

RELIGIOUS GROUPS

In the neighborhood of the campus there are available various religious groups and churches with which interested students may affiliate. A listing of these can be obtained at the Division of Student Services. In addition there are a number of student religious clubs.

TRAFFIC CONTROL HANDBOOK

The Campus Security Office distributes copies of the *Traffic Control Handbook* as well as parking decals to registered students. Due to limited parking space, freshman and sophomore resident students are not permitted to have a motor vehicle on campus. Parking policies are reviewed annually by the Student Affairs Committee.

HOUSING

OFF-CAMPUS HOUSING

Private homes, rooming houses and apartments provide additional accommodations for students. Off-campus housing information can be obtained in the Office of Student Services. Listings of available accommodations are maintained in this office, but are not compiled for mailing, since availability changes so frequently. Students themselves are responsible for contacting and making arrangements with landlords. Students are urged to register their local address with the Office of Student Services.

CAMPUS HOUSING

Five residence halls and one resident student apartment complex provide housing for approximately 1,332 undergraduate students — 842 women and 490 men.

SHEA-DURGIN HALL — Named in honor of Dr. Ellen Shea, former Dean of Women and Dean of Students, and Professor Emeritus George Durgin, former mathematics teacher, accommodates 600 students. The lower floor contains reception rooms, a game room, music room, post office, laundry, vending machine room, and cafeteria.

SCOTT HALL — Scott Hall is named in honor of Dr. Zenos Scott, President of the College from 1933 to 1937. It houses 140 students.

WOODWARD HALL — Woodward Hall is named in honor of Eliza Bond Woodward, a revered teacher who served as a member of the faculty from 1857 to 1883. It has 85 double, triple, and quad rooms and accommodates approximately 240 women.

POPE HALL — Pope Hall, named in honor of Miss S. Elizabeth Pope, former Dean of Women who served the College for over six decades, houses 160 women.

GREAT HILL STUDENT APARTMENTS — An apartment complex located near Shea/Durgin Hall houses 192 students. Each apartment has four single rooms and one double room, a common living area and complete kitchen facilities.

Each resident hall is supervised by a professional staff member, Resident Assistant Supervisors, and residence hall governments. Complete information concerning residence hall programs and privileges is contained in the Student Handbook, *New Dimensions*.

All resident students are required to take their meals in the College Dining Hall. Students living in apartments have the option of a meal plan.

Requests for residence hall space for incoming students, either freshmen or transfer are made directly to the Admissions Office. Applications for residence hall placement far exceed the openings available. Assignments to a residence hall is based on the total evaluation of the candidate including the distance from one's permanent place of residence, academic standing and acceptance of residence hall policy. Students who are not immediately granted residence are placed on a waiting list. At the opening of the academic year the waiting list is turned over to the Director of Housing. Further placement will be made by the Director. Students who are on a waiting list for space in a College residence hall are not guaranteed living accommodations within any specified time.

Although the College does not have housing facilities for married couples, marital status as such is not a factor in the assignment of a room in a residence to any individual student. On-campus housing is not available for graduate students although a limited number of rooms are reserved for Resident Assistant Supervisors.

Each applicant for a residence hall reservation must pay a room deposit of \$50.00 following notification of acceptance to a residence hall. This deposit will be deducted from the total second semester residence hall fee of students who attend and will be forfeited by those who do not enroll. Students who enroll for residence and then decide to commute will also forfeit their deposit.

Students who are assigned to residences are required to pay a \$50.00 "Residence Hall Security Deposit." Damages specifically performed by an individual student or an identifiable group of students are billed at the time of the assessment of damages. General and assessable damages are prorated and paid for from the students' security deposit. Unused deposits are refunded at the end of the academic year.

FINANCIAL AID

All Bridgewater State College students are encouraged to apply for financial aid in order to meet the cost of their education. Students must be enrolled at least half-time in either an undergraduate or graduate degree program to receive financial assistance from the College. In considering students for financial assistance, the College places emphasis upon financial need. This need is the amount by which the total costs of college attendance, including reasonable costs of transportation, room and board, and other personal expenses, exceeds the expected family contribution. Each eligible student has equal access to the College's financial aid funds based upon the resources of both the parents and student. The aid from the College will be a supplement to the contribution of the family.

To provide a basis for fair and equitable evaluation in determining financial need, Bridgewater State College is a participating member of the College Scholarship Service (CSS). This organization utilizes a needs analysis system which calculates expected parental and student contributions from income and assets. All students applying for financial assistance from Bridgewater must file a Financial Aid Form (FAF) with the College Scholarship Service, Box 2700, Princeton, New Jersey 08541. The FAF may be obtained through any high school guidance office or through Bridgewater's Financial Aid Office. It takes approximately six weeks for CSS to process applications and forward its analysis to the College and other agencies. The Financial Aid Office will then send the applicant a Bridgewater State College Institutional Financial Aid Request Form which must be completed and returned to the College. This Institutional Form must be supported by a copy of the previous year's federal income tax return.

The deadline for submission of all completed forms to the Financial Aid Office at Bridgewater for those students entering the Fall Semester is April 15. Applications will be accepted after this date, but the availability of funds for eligible students is not guaranteed. Applications for students entering the Spring Semester is November 15. In order to be considered for renewal funds, candidates must reapply each year, following the same application procedures. Although the amount and type of aid offered may change due to the funds available to the College and to the dictates of program guidelines, applicants will continue to be eligible as long as financial need is demonstrated and the student remains in good academic standing.

Listed below are several federal and state sponsored programs, including grants, loans and jobs, in which the College participates and offers to its students.

BASIC EDUCATIONAL OPPORTUNITY GRANT PROGRAM (BEOG)

This grant is administered directly by the federal BEOG Agency to all needy undergraduate students who are attending Bridgewater on at least a half-time basis. The amount of the award is based upon the student's eligibility for financial aid, the cost of the College attendance, and the monies available nationally for this program. The BEOG agency responds directly to the applicant with response papers called the Student Eligibility Report (SER). The SER must then be forwarded to the Financial Aid Office for proper calculation.

SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT PROGRAM (SEOG)

This program is designed to assist undergraduate students of exceptional financial need who, without this grant, would be unable to continue their education. An SEOG grant is awarded after all other forms of aid have been applied and there still remains an unmet need that presents an unusual and severe financial hardship to the student and family.

THE NATIONAL DIRECT STUDENT LOAN PROGRAM (NDSL)

This program is designed for needy students who are enrolled at least half-time in an undergraduate or graduate academic program and who desire a loan to meet their educational expenses. Repayment of the loan at 4% interest begins 6 months after graduation and may be subject to various deferments and cancellation benefits depending on the vocation of the borrower after completion of his/her education.

THE MASSACHUSETTS HIGHER EDUCATION LOAN PLAN (HELP)

This is another source of financial assistance for the education of undergraduate or graduate students but designed to assist middle or upper income families. This particular loan enables a student to borrow directly from a bank, credit union, or savings and loan association, which is willing to make the education loan to the student. The maximum a student may borrow is \$2,500 a year and the interest rate is currently 9 percent. This may vary, however, depending on the availability of funds and the policies of the lending institutions. Students who wish to apply for HELP loans should go directly to their local bank to obtain the necessary application forms. Consequently, the College will receive these completed forms from either the bank or student, and the Financial Aid Office will certify enrollment, college costs, and will recommend a proper loan amount to the lending

institution. Many students are eligible for Federal Interest Benefits while participating in this program. If a student qualifies for these benefits, the Federal Government pays the interest while the student is attending school in good standing, until repayment begins.

THE COLLEGE WORK STUDY PROGRAM (CWSP)

This program provides jobs for students who have financial need and who can earn a part of their educational expenses. College Work Study is designed to assist undergraduates and graduate students who are enrolled in at least a part-time program of study. Students are assigned to various departments or agencies on and off the campus, and they are paid at an hourly rate in accordance with campus policies and federal regulations.

STUDENT EMPLOYMENT REFERRAL SERVICE (SERS)

The Student Employment Referral Service is part of Bridgewater State College's Work Study Program. The program is coordinated and administered through Bridgewater State College's Financial Aid Office. The S.E.R.S. assists all students of the College by identifying job opportunities with business and industry. The Student Employment Referral Service serves as a clearinghouse for part-time and full-time employment, seeking out job opportunities, keeping current employment listings, and referring students to employers.

TUITION WAIVER PROGRAM

Bridgewater State College assists undergraduate students of exceptional financial need with tuition reductions of varying amounts. A waiver may be granted after all other forms of aid have been applied and there remains unmet need that presents financial hardship to the student and family.

MASSACHUSETTS BOARD OF HIGHER EDUCATION SCHOLARSHIP (MBHE)

Bridgewater State College requires all Massachusetts financial aid applicants to file for this undergraduate scholarship. The MBHE is a \$300 stipend at all state colleges, and the awards are designed to assist eligible students with academic proficiency. To apply, simply list the MBHE (0558) as a recipient on the Financial Aid Form (FAF) and then submit the form to Princeton, New Jersey, for processing. The deadline for students applying for Massachusetts Board Scholarships as new applicants is March 1 and for renewal students is April 1 each year.

ALUMNI SCHOLARSHIPS

The Bridgewater Alumni Association provides scholarships and a limited number of grants-in-aid each year to needy and deserving Bridgewater undergraduate students. These individual scholarships are provided by 12 separate trust funds, each specifying the particular criteria to be utilized in selecting a recipient for that award. Application forms are available during March and April each year and may be secured in the Office of Financial Aid, Student Services, Alumni Office, and the Student Union Director's Office.

GRADUATE ASSISTANTSHIPS

A limited number of graduate assistantships are offered by the Graduate School, subject to the availability of funds, in areas associated with certain programs of the College. For details regarding graduate assistantships, see the Graduate School section of the catalogue.

OTHER SCHOLARSHIPS

In order to give recognition and prestige to student achievement on campus, many academic departments, clubs, and campus organizations sponsor scholarships and monetary awards to deserving Bridgewater students. A complete listing may be found in the Student Handbook, *New Dimensions*, and further information regarding application procedures may be obtained in the Office of Student Services.

OTHER EMPLOYMENT OPPORTUNITIES

Opportunities, which are not federally sponsored, also exist for student employment on the Bridgewater campus. Applications for student employment in the College Bookstore, Library, dining areas, Student Union, Campus Security, and the Department of Health, Physical Education and Recreation can be obtained through these individual departments. A number of Bridgewater students assist themselves financially in this manner.

TUITION AND FEES*

DAY SESSION

Application and Advance Payment Fees:

A non-refundable undergraduate application fee of \$10 is required of all applicants. Upon acceptance, a non-refundable advance payment of \$50 must be made. This advance payment is credited against tuition when the student enters the College.

Semester Bill

Students are billed twice a year, prior to the start of each semester. Bills are sent to students at their permanent addresses. Payment must be made prior to the due date which will be specified on the bill. Failure to comply will result in a late payment fee of \$5.

TUITION

Residents of Massachusetts (Undergraduate)

Full-time (12 or more credits) — per semester	
..... (Fall, 1981)	\$341.00
..... (Spring, 1982)	\$384.00
Part-time — per credit hour	
..... (Fall, 1981)	\$ 29.00
..... (Spring, 1982)	\$ 32.00

Non-Residents of Massachusetts (Undergraduate)

Full-time (12 or more credits) — per semester	
..... (Fall, 1981)	\$1194.00
..... (Spring, 1982)	\$1344.00
Part-time — per credit hour	
..... (Fall, 1981)	\$ 100.00
..... (Spring, 1982)	\$ 112.00

Residents of Massachusetts (Graduate)

Full-time	
..... (Fall, 1981)	\$375.00
..... (Spring, 1982)	\$422.00
Part-time (per credit hour)	
..... (Fall, 1981)	\$ 32.00
..... (Spring, 1982)	\$ 36.00

*All charges are subject to change.

Non-Residents of Massachusetts (Graduate)

Full Time	(Fall, 1981) \$1228.00
.....	(Spring, 1982) \$1382.00
Part-time (per credit hour)	(Fall, 1981) \$ 103.00
.....	(Spring, 1982) \$ 116.00

Tuition is not charged to any person 65 years of age or over who has an annual income of less than \$12,000.

REQUIRED SEMESTER FEES

Health Services Fee	\$25.00
Library Fee	\$15.00
Student Government Association Fee	\$18.00
Student Union Building Fee	\$27.50
Athletic Fee	\$30.00
Educational Services	\$15.00

Part-time students are charged one-half of the above fees.

OTHER FEES

Physical Education Facilities Fee	\$12.00
Required of all new students	
Placement Fee	\$ 5.00
Required of all seniors	
Student I.D. Card Fee	\$ 5.00
Required of all new students	
Residence Hall Security Deposit	\$50.00
Late Registration Fee	\$ 5.00
Commencement Fee	\$11.00
Day session underclassmen are billed at \$2.50 a year;	
seniors at \$3.50; transfer students assessed retroactively;	
all others at time of graduation.	
Student Teaching Fee (in lieu of Educational Services Fee)	\$75.00
Student Health Insurance Plan (optional)	
(Family Plans available)	\$89.50

ROOM AND BOARD

Room — per semester	
Residence Halls	\$415.00
Resident Student Apartments	\$565.00
Board — per semester	
19 meal plan	(Fall, 1981) \$453.00
.....	(Spring, 1982) \$504.00
14-day meal plan	(Fall, 1981) \$426.00
.....	(Spring, 1982) \$474.00

REFUND POLICY

Upon official written notification of withdrawal by the student (to the Registrar's Office), the following refund policy is applicable. THE DATE AND TIME THAT THE NOTICE IS RECEIVED WILL BE THE OFFICIAL DATE AND TIME OF WITHDRAWAL.

Tuition and Board

66 2/3% until the end of the first week of classes.

(9/15/81-Fall — 1/22/82-Spring)

50% until the end of the second week of classes.

(9/22/81-Fall — 1/29/82-Spring)

33 1/3% until the end of the third week of classes.

(9/29/81-Fall — 2/5/82-Spring)

After the third week of classes NO refund will be made.

Room

Withdrawal Prior to Occupancy — Residents who wish to withdraw from a residence hall prior to occupancy may obtain a refund on room fees provided written notice of intention to withdraw is given to the Director of Housing no later than thirty (30) days before the commencement of either the fall or the spring semester *and* the College is able to fill the vacancy created by the resident's withdrawal.

Withdrawal During Term of Agreement — Residents who wish to withdraw from the residence hall during or at the end of a semester may receive a pro-rata refund on room fees *provided* they notify the Director of Housing in writing prior to their withdrawal *and* the College is able to fill the vacancy created by the resident's withdrawal. Such pro-rata refund shall be determined from the date of occupancy by the resident filling the vacancy.

Fees

Unless stated otherwise, all fees are non-refundable and must be paid by all students who are in attendance for all or part of the semester.

It is the policy of Bridgewater State College and its sister State Colleges that, effective September 20, 1979, students or former students at any of the State Colleges who are listed by the financial office of said State College as having unpaid debts for tuition, room, board, medical or other College related charges where said debts have not been discharged by operation of law or where deferred payment of said debts has not been agreed to by said College will not (1) be *issued* any *diploma* to which said students might otherwise be entitled; (2) be permitted to register for any program at any State College for which said students might otherwise be eligible; and (3) be furnished a certified copy of any State College transcript (unless said transcript is needed to obtain any benefits related to service in the United States armed forces) although said students will be entitled, upon written request, to inspect and review uncertified copies of their transcripts.

PROGRAM OF CONTINUING EDUCATION

Tuition and fees are payable at the time of registration.

TUITION

Residents of Massachusetts	\$35.00 per credit hour
Non-residents of Massachusetts	\$42.00 per credit hour
Audit	\$28.00 per credit hour

FEES

Registration Fee	\$10.00
Library Fee	\$15.00
Student Union Building Fee	\$ 7.00
Educational Services	\$5.00-\$10.00
Charged in all laboratory science courses and in a number of studio and practicum courses.	
Student I.D. Card Fee (new students)	\$ 5.00
Late Registration Fee	\$10.00
Change of Registration Fee	\$ 2.00
Commencement Fee	\$11.00

REFUND POLICY

A student who is entitled to a refund must obtain a form for each course for which a refund is due and file it in the Program of Continuing Education Office. **THE DATE AND TIME THAT THE NOTICE IS RECEIVED WILL BE THE OFFICIAL DATE AND TIME OF WITHDRAWAL.** Telephone and other unofficial notices will not be accepted as notification of withdrawal.

Tuition

Refunds will be based on the scheduled calendar:

Before the first class meeting	100%
After first meeting but before the second meeting	90%
After second meeting but before the third meeting	50%
After third meeting	no refund

Fees

All fees are non-refundable.



The Undergraduate College



ADMISSIONS*

The basic aim of admissions requirements is to assure the selection of students who have demonstrated the ability and promise necessary for success in college studies. Consideration is given to applicants regardless of their race, religion or national origin.

FRESHMAN ADMISSIONS

All Freshmen accepted for admission are admitted to the College and not to a particular major. During the second semester of the Freshman year students may declare a major. See the catalogue section entitled "Academic Policies" for additional information.

Students admitted to Bridgewater State College who suffer deficiencies in reading, writing and/or mathematics may be required, as a condition of acceptance, to avail themselves of developmental courses and other help as prescribed.

Each candidate is considered on the basis of the following requisites:

A. Secondary School Preparation

Candidates for admission must have a high school diploma from an accredited secondary school or the equivalent preparation. An official transcript of the candidate's secondary school academic record, including the grades of the first marking period or the first quarter of the candidate's senior year, must be filed by the high school.

B. College Entrance Examination Board

All candidates must submit the following information:

1. The College Entrance Examination Board's Student Descriptive Questionnaire (SDQ).
2. The results of the College Entrance Examination Board's Scholastic Aptitude Test (SAT). It is advised that students take this examination by January of the senior year. Any candidate submitting SAT scores taken during the junior year should have those scores and SDQ reports forwarded during the academic year in which application is made to the College. It is the applicant's responsibility to arrange for the necessary test scores to be forwarded directly to the College from the Educational Testing Service in Princeton, New Jersey. The College code is number 3517.

*The College reserves the right to change admission requirements at any time without advance notice.

C. Personal Qualifications

Confidential data concerning the candidate, including recommendations and comments by teachers and counselors, are given consideration in determining the fitness of the candidate for the proposed program of study.

DATES OF ADMISSIONS

Bridgewater State College has a "rolling admissions" policy. There is no one date on which the College notifies all applicants simultaneously of their acceptance. Candidates are notified on a continuing basis over a period of several months, beginning about January 15.

If the number of qualified applicants exceeds the number that the facilities of the College will accommodate, a waiting list is established.

Those candidates who have not met the requirements for admission by March 1 may jeopardize their chances of receiving consideration for acceptance since the College may close freshman admissions at this time.

TRANSFER ADMISSIONS

Bridgewater State College, with its strong emphasis on Transfer Student Programs, welcomes qualified Transfer Students and encourages those students to make application. The following is an explanation of the procedure for admission and conditions of acceptance:

A. Transfer candidates will be evaluated for admission on the basis of their previous college academic record and must supply a transcript or transcripts of all college work attempted.

All applications should be filed by December 1 for January admission, and by April 1 for September admission.

B. All candidates must submit a catalog from the previous college(s). Whenever possible, degree credit will be granted for course work completed at other institutions of higher education. Courses which do not fit the degree program may be counted as fulfilling the free elective requirements of the four-year curriculum. The transfer student will be required to fulfill the same degree requirements as any other student. However, a student who has completed the general education requirements of another Massachusetts State College prior to transferring, will not be obligated to meet additional or different general education requirements at Bridgewater State College.

C. Honor courses, programs of independent study, Advanced Placement, College Level Examination Program (CLEP) and advanced standing credit earned at other institutions of higher education will be accepted at Bridgewater.

D. Most Transfer Students complete at least two academic years at the College, although if all requirements are met satisfactorily, the College will grant a baccalaureate degree with a minimum of one full year of academic work taken at the College.

E. The number of transfers accepted by Bridgewater will be determined by existing vacancies in the various degree programs and the number of applicants determined eligible under the above guidelines. Among qualified and eligible transfer applicants, priority in admissions will be given to transfer students in good standing from within Massachusetts public higher education.

COMMUNITY AND JUNIOR COLLEGE TRANSFERS

A. Throughout higher education in the Commonwealth, an associate degree from any two-year college signatory to the ***Commonwealth Transfer Compact*** is honored as a unit and is construed as: (1) completion of at least 60 hours of work toward a baccalaureate degree, and (2) completion of at least 33 hours toward fulfillment of the General Education Requirements for the baccalaureate degree.

B. A student transferring from a two-year institution is entitled to transfer for credit toward the bachelor's degree no more than the two years of credit which constitute the requirements of the Associate Degree Program taken as a unit.

READMISSION

Applications for readmission must be filed by June 1 for first semester readmission and December 1 for second semester readmission. Students who withdrew for low scholarship must arrange an interview with the Director of Admissions.

SPECIAL STUDENTS

The Day Session admits, on a semester basis, a number of non-degree students. Students seeking admission in this category should contact the Office of Undergraduate Admissions for additional information.

INTERNATIONAL STUDENTS

All international students applying for admission to the College must file a preliminary application with the International Student Advisor, indicating their educational background. If it is deemed that the student might be eligible for admission, the student will be asked to submit credentials. Students for whom English is a second language must submit the results of the Test of English as a Foreign Language (TOEFL).

International students should begin the application procedure no less than nine months in advance of the expected date of admission. All correspondence should be addressed to Dr. Robert Mogilnicki, International Student Advisor.

SPECIAL ADMISSIONS PROGRAMS

PROGRESS

The Program for the Recruitment and Retention of Special Students (PROGRESS) was established to help high school graduates who possess both the motivation and potential necessary to achieve a college degree, but who, because they are members of a minority group or come from a background of poverty, have not been properly prepared to undertake a regular freshman program.

The Scholastic Aptitude Test (SAT) should be taken even though no great emphasis will be placed on the scores when determining admission through PROGRESS. The high school performance of students applying through PROGRESS will be judged on the basis of identifiable achievement patterns over the high school experience rather than on class standing or rank.

Letters of recommendation from guidance counselors, teachers, and in some cases community leaders, are a great assistance in evaluating an applicant's ability to do college-level work.

Each student admitted through PROGRESS is assigned an academic advisor and will be encouraged to carry courses and course loads suitable to individual needs. Students must carry at least nine semester hours, but no more than 15 hours in the freshman year.

Tutorial services are available for all courses. The courses taken by PROGRESS students are the same as those taken by all students at Bridgewater. PROGRESS students must meet the same degree requirements for graduation as do all other students at the College.

Financial assistance is available through the Financial Aid Office. The amount of financial assistance each student will receive is dependent upon individual needs as demonstrated in the standard financial aid application form (Parent's Confidential Statement).

OUTREACH

OUTREACH is a program designed for the recruitment, counseling, and tutoring of students who have traditionally had limited access to higher education. This group would include among others, minority groups, veterans, and working adults. An important aspect of the OUTREACH program is that normal admission requirements may be altered in individual situations. Cognizant that applicants under the OUTREACH program may be presenting varied levels of preparedness, it is suggested that interested

applicants contact the Office of Undergraduate Admissions to arrange for a personal interview.

PROGRAM FOR REGISTERED NURSES

Provisions have been made for graduates of three-year diploma schools of nursing to complete programs leading to degrees in any of the academic majors being offered at the College.

While encouraging Registered Nurses to pursue degree work for personal enrichment, the College supports the guidelines of the National League of Nursing for the professional education of nurses. These guidelines caution nurses whose career goals include the opportunity to assume supervisory and/or teaching responsibilities in the field of nursing, that degree programs to be pursued should be taken only at those institutions which offer degrees in Nursing Education.

Through this special admissions program, students accepted to the College are granted 60 credit hours for their school or nursing work. Where applicable, these credits may be used to meet General Education, major, or elective requirements. As with all others transferring into the College, Registered Nurses are expected to meet the same degree requirements as outlined in the *Academic Policies* section of this catalogue.

NEW ENGLAND REGIONAL STUDENT PROGRAM

Bridgewater State College participates in a regional cooperative program administered by the New England Board of Higher Education. The program — the New England Regional Student Program — permits qualified New England residents to study with in-state tuition and admission privileges in certain programs at any of the state universities, state colleges, two-year colleges and technical institutes.

The program's purpose is to expand higher education opportunities for New England residents by making available on an equal basis those courses not commonly offered at every institution.

Information about the program can be obtained from the Bridgewater State College admissions office, from any guidance counselor, or from the New England Board of Higher Education, 68 Walnut Road, Wenham, Massachusetts 01984.

HEALTH

All candidates, regardless of the intended area of study, are required to have a health examination before entrance. Information concerning such examinations is forwarded to prospective students after notification of acceptance. The candidate, if a teacher education program is the intended area of study, must be in good physical and mental health, free from

disease, infirmity, or other defect, which would render the candidate unfit for public school teaching.

ADVANCED STANDING

Advanced Standing with college credit and reduction of distributions of the College requirements is granted entering students who have demonstrated college-level proficiency through established procedures.

ADVANCED PLACEMENT PROGRAM

The College participates in the College Entrance Examination Board's Advanced Placement Program, through which secondary schools deliberately prepare able, interested students for advanced work at college in the following disciplines: American history, art, biology, chemistry, English, European history, French, German, Latin, mathematics, music, physics, and Spanish. Scores of 3 or above are considered satisfactory by the College and credit is awarded accordingly.

COLLEGE-LEVEL EXAMINATION PROGRAM (CLEP)

Bridgewater State College encourages able students to seek advanced standing through one or more of the CLEP examinations described below. Credit is awarded for scores at the 50th percentile or above.

CLEP credit may not be awarded if equivalent course work has been completed either prior to, or later than, the comparable CLEP examination. It is the student's responsibility to consult the current Bridgewater State College catalogue for area or course equivalent distribution of CLEP credits.

Students may arrange to take the CLEP Examination at any of the national test centers, including Bridgewater State College. Those students interested in taking the exams at Bridgewater should contact the Office of Undergraduate Admissions.

There are two types of CLEP (College-Level Examination Program) examinations; the General Examinations and the Subject Examinations. Both measure factual knowledge and understanding, as well as the ability to see relationships and apply basic principles to new problems. The examinations are not based on courses given at Bridgewater State College but on typical courses in a variety of colleges throughout the country.

GENERAL EXAMINATIONS

The College requires all students to complete some study in certain fields that are deemed important for everyone, regardless of special interests or occupational goals. Such required study is called "General Education." The CLEP General Examinations provide a way to show that you have acquired some general education; the equivalent of what is given in required freshman and sophomore courses at the college.

There are five General Examinations which can be applied toward the General Education Requirements at Bridgewater State as follows:

General Examinations	Credit Allowed	Area of Course Equivalent
English Composition*	3	English Composition I (EN 101)
Mathematics	6	Mathematics (MA 105, 106 or 108)
Natural Sciences (Biology/ Physical)	6	Natural Sciences (BI-100 or 102, PH 200)
Humanities (Fine Arts/Literature)	6	Humanities & Creative Arts (AR 110, EN 221)
Social Sciences/History	6	Social Sciences

*(Bridgewater requires a supplementary essay to be taken at the College.)

SUBJECT EXAMINATIONS

The subject examinations now offered are comparable to the final or end-of-course examinations in particular undergraduate courses. A student who has completed one of these courses successfully in college can probably earn satisfactory scores on the corresponding CLEP Examination. So can the person who has learned the subject in some other way, such as by independent study. The following subject examinations are offered:

Composition and Literature	Credit Allowed	Science and Mathematics	Credit Allowed
American Literature	6	Calculus with Elementary Functions	6
Analysis and Interpretation of Literature	6	College Algebra	3
College Composition*	6	College Algebra-Trigonometry	3
English Literature	6	General Biology	6
Freshman English*	6	General Chemistry	6
		Statistics	3
		Trigonometry	3
Foreign Languages			
College French—Levels 1 & 2†		Business	
College German — Levels 1 & 2†		Computers and Data Processing	3
College Spanish—Levels 1 & 2†		Elementary Computer Programming—Fortran IV	3
Behavioral Sciences, Social Sciences, and History		Introduction to Management	3
Afro-American History	3	Introductory Accounting	3
American Government	3	Introductory Business Law	3
American History I: Early Colonizations to 1877	3	Introductory Marketing	3
American History II: 1865 to the Present	3		
Educational Psychology	3	Nursing¹	
General Psychology	3	Anatomy, Physiology, Microbiology	
Human Growth and Development	3	Behavioral Sciences for Nurses	
Introductory Macroeconomics	3	Fundamentals of Nursing	
Introductory Microeconomics	3	Medical-Surgical Nursing	
Introductory Micro-and Macroeconomics	3		
Introductory Sociology	6	Dental Auxiliary Education¹	
Money and Banking	3	Dental Materials	
Western Civilization I: Ancient Near East to 1648	3	Head, Neck, and Oral Anatomy	
Western Civilization II: 1648 to the Present	3	Oral Radiography	
		Tooth Morphology and Function	
		Medical Technology¹	
		Clinical Chemistry	
		Hematology	
		Immunohematology and Blood Banking	
		Microbiology	

*Bridgewater requires a supplementary essay to be taken at the College.

†Credit decisions are adjusted on the basis of total score in relation to prior years of study.

¹Candidates interested in taking these CLEP examinations should contact the Office of Undergraduate Admissions prior to registering for them.

ACADEMIC PROGRAMS

BACHELOR OF ARTS/BACHELOR OF SCIENCES

The Bachelor of Arts and Bachelor of Science degree programs allow students to select from a number of areas, and provide preparation for high school teaching (if High School Education is elected as a minor), graduate school, and fields of endeavor related to the major area of study. Majors are currently offered in:

<i>Anthropology</i>	<i>Geography</i>
<i>Art</i>	<i>History</i>
<i>Aviation Science</i>	<i>Management Science</i>
<i>Biology</i>	<i>Mathematics</i>
<i>Chemistry</i>	<i>Philosophy</i>
<i>Chemistry-Geology</i>	<i>Physical Education</i>
<i>Chemistry-Professional</i>	<i>Physics</i>
<i>Communication Arts and Sciences</i>	<i>Political Science</i>
<i>Computer Science</i>	<i>Psychology</i>
<i>Earth Sciences</i>	<i>Social Work</i>
<i>English</i>	<i>Sociology</i>
<i>French</i>	<i>Spanish</i>

Except for those students in the Humanities, Creative Arts, or History, a student may decide, after having chosen a major, whether to earn a Bachelor of Arts or a Bachelor of Science degree by the selection of free electives. *A free elective is any course which is not used to meet the General Education Requirements or major requirements.*

Thus, the Bachelor of Science degree is awarded to those who choose the majority of their free electives in the Social and Behavioral Sciences or Natural Sciences and Mathematics, while the Bachelor of Arts degree is awarded to those who choose the majority of their free electives in the Humanities or Creative Arts.

Students are advised to consult with their department chairperson or major advisor early in their academic career, but no later than the end of the sophomore year, in order to be certain that course selection will allow graduation with the desired degree.

Students seeking admission to the Aviation Science major must pass at least a Class II FAA physical for the concentration in Flight Training or a Class III FAA physical for the Aviation Management concentration.

BACHELOR OF SCIENCE IN EDUCATION

The Bachelor of Science in Education prepares students for teaching in the elementary schools, or for teaching in the area of Special Education.

Majors are currently offered in:

Early Childhood Education

Elementary Education

Special Education

MAJOR

A student must meet all requirements of the major as specified under the departmental listings. A minimum of 24 credits and a maximum of 36 credits within the major may be required by a department. The 24 to 36 credits reflect all courses taken in the major department, including those which are listed under the distribution of General Education Requirements. The student should select a major by the end of the sophomore year.

DOUBLE MAJOR

In order to graduate with a double major, a student must meet all the requirements of both majors sought. The student's petition to double major must be made in writing and agreed to by both departments. Official notification of the approval of a double major will be made by the Office of the Registrar.

CONCENTRATION

A concentration is a unified set of courses usually composed of core requirements and of requirements particular to the chosen major concentration. The total number of core and particular requirements must be at least 24 but not more than 36 credit hours, even if students are not required to complete a concentration for graduation. Cognate courses are not counted as part of the 36 hours. Only students selecting the major field of study may complete a concentration within that major. The major department may choose to have the completed concentration indicated on the student's transcript. Concentrations are currently available in:

Anthropology

Cultural Anthropology
Public Archeology

Aviation Science

Flight Training
Aviation Management

Communication Arts and Sciences

Speech Communication
Communication
Disorders
Theatre

Early Childhood Education

Pre-School
Kindergarten-Primary

Management Science

General Management
Environment and Resource
Management

Physical Education

Athletic Training
Coaching
Exercise Science/
Health Fitness
Health
Motor Development
Therapy
Physical Education for
Adolescents & Adults
Physical Education for
Pre-Adolescent Children
Recreation

Political Science

Public Administration
International Affairs

Psychology

Industrial-Personnel
Psychology
Medical Psychology

Sociology

Criminology

MINOR

A minor is a unified set of courses chosen outside of the major field of study requiring not less than 18 nor more than 21 hours. The minor is recorded on the student's transcript. Minors may include courses from only one department or may be multidisciplinary. Students may use courses which satisfy G.E.R. or departmental requirements to fulfill multidisciplinary minor requirements unless otherwise prohibited. Specific requirements to fulfill multidisciplinary minor requirements unless otherwise prohibited. Specific requirements for a minor are found under the departmental descriptions.

Minors are currently offered in:

<i>American Studies</i>	<i>Linguistics</i>
<i>Anthropology</i>	<i>Mathematics</i>
<i>Art</i>	<i>Music</i>
<i>Art History</i>	<i>Philosophy</i>
<i>Biology</i>	<i>Physical Science</i>
<i>Canadian Studies</i>	<i>Physics</i>
<i>Chemistry</i>	<i>Political Science</i>
<i>Communication Disorders</i>	<i>Portuguese</i>
<i>Computer Science</i>	<i>Psychology</i>
<i>Data Processing</i>	<i>Radio and Television</i>
<i>Earth Sciences</i>	<i>Operation and Production</i>
<i>English</i>	<i>Religious Studies</i>
<i>French</i>	<i>Russian</i>
<i>Geography</i>	<i>Russian & East European</i>
<i>German</i>	<i>Studies</i>
<i>Health</i>	<i>Scientific Illustration</i>
<i>High School Education*</i>	<i>Sociology</i>
<i>History</i>	<i>Spanish</i>
<i>Instructional Media</i>	<i>Speech Communication</i>
<i>Italian</i>	<i>Theatre Arts</i>
<i>Library Science</i>	<i>Urban Affairs</i>

**Students who wish to become junior high school or high school teachers elect a minor in High School Education and a major from one of the major fields offered. This minor requires more than 21 hours in order to satisfy Massachusetts certification standards.*

DIRECTED STUDY

The college encourages students to pursue certain of their interests through directed study. Such an undertaking involves independent thinking, hard work, and creativity along with the guidance and help of a faculty member. The end result should be a paper or project accepted by the faculty member working with the student. Directed Study, which is limited to a maximum of six credits for graduation purposes, is available for the pursuit of such projects requiring independent work. Application forms

for directed study are available from the student's department and should be submitted to the department chairperson prior to registration.

INTERNSHIP

A number of departments within the College offer students the opportunity to enroll in an internship, Practicum, or Field Experience for academic credit. Such experiences provide advanced students, usually in their third or fourth year, the chance to undertake a supervised practical experience within their field of study. Normally, field experience opportunities are available only during the regular academic year.

Students interested in such a field experience have the option of (1) consulting with their faculty advisor for details on programs available through the department, or (2) developing their own program proposals, subject to the approval of the department. If the field experience desired is proposed by the student, it is the student's responsibility to locate a faculty member who will provide the necessary supervision.

APPLICATION AND SELECTION

Application forms for a field experience are available from the student's department. The completed form must be filed with the chairperson of the department in which the field experience is to be undertaken, and *must be filed with the department no later than the end of the first quarter of the semester prior to the semester in which the field experience is to be undertaken.*

The department will screen all applications in order to select those students best suited for the positions available. The chairperson will forward the approved application forms to the Registrar to enroll those students selected.

SUPERVISION AND GRADING

Supervision, evaluation and grading of a field experience is the responsibility of each department offering such a program. A student may be removed from the program if, in the judgement of the faculty supervisor, it is in the best interests of the student, agency, and/or College. Grades are based on written evaluations from both the faculty supervisor and the agency supervisor.

CREDIT

From three to fifteen credits in field experience may be earned and applied toward graduation requirements. The number of these credits which may apply toward the major will be determined by each department. A minimum of 45 clock hours in the field is required for each credit hour granted.



HONORS PROGRAM

The general aim of the Honors Program is to encourage students to do more intensive, independent, and creative work. More specifically, its aims are: to encourage superior and interested students to achieve their fullest intellectual potential through critical thinking, scholarship, and research; to help these students improve their skills in oral and written expression; to present an opportunity for frequent and close association of able students for intellectual exchange among themselves and with faculty members and other scholars; and to create an atmosphere which fosters intellectual, artistic, and academic achievement.

The following departments are at present participating in the Honors Program: Biology, Chemistry, Speech Communication, Theatre Arts and Communication Disorders, Elementary and Early Childhood Education, English, History, Foreign Languages, Mathematics and Computer Science, and Health, Physical Education, and Recreation. Students who are interested should consult the appropriate chairperson.

The Honors Program does not require more credits than the regular course of study. Rather, it enables the superior student to take individualized courses and seminars and to conduct independent study and research under faculty guidance, culminating in an honors thesis or research project.

Graduation with departmental honors is recognized by inscribing on the student's transcript the phrase, *with Honors in* (the appropriate field).

MULTIDISCIPLINARY PROGRAMS

The College offers a number of multidisciplinary programs, providing majors, minors, and pre-professional programs. See the section on *Undergraduate Multidisciplinary and Pre-Professional Programs*.

CROSS REGISTRATION

CAPS

College Academic Sharing Program is designed to provide full-time students attending a Massachusetts State College the opportunity to study at another Massachusetts State College in order to add a different or specialized dimension to their undergraduate studies. Students may take 3 to 30 semester hours of credit without going through formal registration procedures and without a formal transfer credit approval process.

SACHEM

Through the Southeastern Association for Cooperation of Higher Education in Massachusetts, qualified full-time students may cross-

register for two courses each semester, one of which is not offered at their own institution, without going through formal registration procedures. Tuition is covered within the student's full-time tuition charge at Bridgewater State College. Schools participating in the program include: Bristol Community College, Cape Cod Community College, Dean Junior College, Massachusetts Maritime Academy, Massasoit Community College, Stonehill College, Swain School of Design, and Southeastern Massachusetts University. Application for cross-registration must be made through the Office of the Registrar.



GENERAL EDUCATION REQUIREMENTS

The College requires that all students complete certain General Education Requirements in addition to courses in their major field of study and electives. These requirements are distributed throughout the various academic departments so that students will study a variety of disciplines during their college career.

Opportunity exists for students to design their own General Education Requirements rather than following the requirements outlined. For detailed information on this, contact the Coordinator of Academic Advising.

Distribution of GER courses must include the number of credit hours indicated for groups I-VI (total of 40 credits). The remaining six credits may be selected from group VII.

I HUMANITIES 9 crs.

English Composition I*	3 crs.	(U.S. History to 1865). Those who do not elect HI 221 must take PO 273 (U.S. and Massachusetts Constitutions).
Literature	3 crs.	
Philosophy	3 crs.	

*Proficiency in English Composition is required of all students. This requirement may be satisfied by passing EN 101 (English Composition I) with a grade of B or better. Students who receive a grade of C or below in EN 101 are required to take EN 102 (English Composition II), which *does not* count toward General Education Requirements. The requirement may also be met by successfully completing the AP, CLEP, or departmental challenge examination.

III CREATIVE ARTS 6 crs.

Art	3 crs.
Music	3 crs.
Speech Communication	3 crs.
Theatre Arts and Communication Disorders	

IV BEHAVIORAL SCIENCES 6 crs.

Anthropology	3 crs.
Psychology	3 crs.
Sociology	3 crs.

II SOCIAL SCIENCES 9 crs.

History**	6 crs.
Economics, Geography as a Social Science, History, Political Science	3 crs.

**Massachusetts state law requires all students to take a course in the Federal and State Constitutions. Students may fulfill this requirement by electing HI 221

V NATURAL SCIENCES & MATHEMATICS 9 crs.

Sciences (including one semester of a lab science)	6 crs.
Mathematics	3 crs.

VI LIBRARY INTRODUCTION (LI 102) 1 cr.

This requirement should be met during the first year of attendance.

VII GER ELECTIVES 6 crs.

Humanities	Behavioral Sciences
Creative Arts (not more than 3	Health
credits from each area)	Natural Sciences and Mathematics
Social Sciences (including	
Geography as a Social Science)	

GUIDELINES ON GENERAL EDUCATION REQUIREMENTS

1. Only one course (3 credit hours) in a student's major field may be applied toward the GER's, except for English and History major programs in which a maximum of 6 hours may be applied. However, cognate courses required by the major will apply, as appropriate, toward the GER's.
2. No co-curricular activities may be used to satisfy the GER's.
3. Beyond the General Education and the major requirements, all remaining courses are free electives. A free elective is any course not required to fulfill either the General Education or the departmental and cognate requirements of the major.

ACADEMIC POLICIES

The regular academic year consists of two semesters of approximately sixteen weeks each. Curricula leading to baccalaureate degrees are so planned that a student pursuing a normal program will ordinarily be able to complete the requirements for graduation in four years or eight semesters, with the exception of those students majoring in Special Education.

GRADUATION REQUIREMENTS

Degrees will be awarded to candidates who have fulfilled the following:

1. A MINIMUM of 120 credits, distributed according to the General Education Requirements and the requirements of a major;
2. completion of at least 30 credit hours at Bridgewater;
3. a minimum cumulative quality point average of 2.0;
4. clearance of all financial debts to the College.

No student's name may appear on the graduation list unless the number of credits, including those completed successfully in the last semester, are sufficient to meet the minimum requirements for graduation.

Participation in graduation ceremonies is limited to those students who have met all graduation requirements. Students who have not met these requirements will be given the opportunity to participate in a subsequent ceremony.

DEGREE APPLICATION

All students who expect to receive their degree from Bridgewater State College are required to complete a formal degree application. These applications are available in the Office of the Registrar.

Degree Application cards, signed by the Chairperson of the student's major department, must be returned to the Office of the Registrar by:

November 1	for February Graduation
December 1	for May Graduation
May 31	for August Graduation

GRADUATION WITH HONORS

Academic excellence for the baccalaureate program is recognized by inscribing the degree *summa cum laude* (cumulative average of 3.8), *magna cum laude* (3.6), or *cum laude* (3.3). The cumulative Q.P.A. determined for honors only is based on all college-level work attempted. Honors is based on all college level work attempted, including all work attempted at other institutions.

GRADING SYSTEM

The college uses the letter-grade system of marking to indicate the student's relative performance; A — Superior; B — Excellent; C — Satisfactory; D — Poor; E — Failure; W — Withdrawn. In computing averages, grades are assigned the following numerical values: A — 4; B — 3; C — 2; D — 1, E — 0. No numerical value is assigned to P (Pass) and F (Fail) grades.

An INCOMPLETE may be given by an instructor only when a student has missed the final examination for good reason or has not completed a major assignment which can be finished within a short time. *The student's request for an Incomplete must be made in writing and must have the instructor's written approval.* Incompletes must be made up no later than the fourth week of the regular academic semester following that in which the Incomplete was recorded. A grade of "E" will automatically be entered on the transcript of any student who fails to meet this requirement.

Grades for courses which are taken through the Program of Continuing Education become a part of the student's Day Session record and thus are used in computing the Q.P.A.

No course for which a passing grade was received may be repeated for credit, nor will any grade received for a course which has been repeated replace the original passing grade.

DEAN'S LIST

The Dean's List is published at the termination of each academic year to honor academic achievement. A 3.3 average for the academic year is required with a minimum of 24 credits completed.

ACADEMIC STANDING

Credit Hours Attempted*	Probation QPA	Separation below this QPA
0 — 15	1.00 — 1.49	1.00
16 — 30	1.50 — 1.64	1.50
31 — 45	1.65 — 1.74	1.65
46 — 60	1.75 — 1.84	1.75
61 — 89	1.85 — 1.99	1.85
90 and above	Must maintain 2.00 or better	

*Credit hours attempted includes all work taken at Bridgewater State College plus all college credits accepted in transfer. However, only quality points earned at Bridgewater State College will be utilized in determining the student's cumulative quality point average (QPA).

Transfer students are allowed a first semester minimum Q.P.A. of 1.50. Thereafter, the standards cited above (which must include number of hours of transfer credit) will apply.

Warning notices are sent at mid-semester to all students who fail to maintain a "C" average in any course.

Students are placed on academic probation at the end of the semester if they fail to maintain the minimum QPA required.

Any student whose Q.P.A. falls below the minimum will normally be separated from the College. Students who are withdrawn due to low scholarship may not take courses in either the Day School or the Program of Continuing Education for at least one semester, not including the Summer Session. It is highly recommended that such students give evidence of a semester's academic work at another institution of higher learning, upon reapplying to the College.

If readmitted, the student is placed on academic probation and must achieve a minimum Q.P.A. of 2.00 in order to continue.

Academic probation will be supervised by the student's academic advisor and the Division Head, and may involve (1) an adjustment in the student's academic load, (2) frequent interviews between the student and advisor for the analysis of difficulties and for checking the student's progress, (3) a stipulation that certain courses be taken to improve the student's academic performance, (4) restrictions on the student's extracurricular activities, and (5) other such precautions as are deemed advisable.

REGISTRATION

Each semester a registration and counseling period is held to select the next semester's program and to discuss the overall standing and requirements of the student.

COURSE LOADS

The normal course load is 15 hours. However, undergraduates may carry a minimum of 12 hours or a maximum of 18 hours without special permission. In order to carry less than 12 hours or more than 18 hours, students must seek official approval from the Office of the Registrar.

Students may not carry semester courses during the session in which they enroll in the Student Teaching Practicum.

ATTENDANCE POLICY

Class attendance is an important part of the educational process in most courses. At the beginning of each course, the faculty member will explain to the students the policy on attendance, particularly what is considered excessive absence. Having this information, students are expected to use judgment and discretion about attending the class. First-semester freshmen and students on probation are allowed no unexcused absences.

COURSE DROPS AND ADDS

During the first two weeks of a semester or the first five class days of a quarter, students may drop or add courses and no grade will be recorded. Drop-Add forms are available from your department chairperson and must be signed and returned to the Office of the Registrar during the Drop-Add period.

In cases where a student does not follow these procedures a grade of "E" will be entered on the record. This grade will be used to compute the QPA.

WITHDRAWAL FROM COURSES

If, for some serious reason, a student wishes to withdraw from courses after the Drop-Add period, written permission must be secured on forms provided by the Office of the Registrar. Only if such a form is filed in the Registrar's Office and the second copy returned to the head of the department in which the student is majoring may the grade of "W" be recorded. In all other instances a grade of "E" shall be given. *Normally, no student will be permitted to withdraw from a semester-long course after the twelfth week of classes, or after the sixth week of a quarter course.*

WITHDRAWAL FROM THE COLLEGE

Official withdrawal forms may be obtained from the student's Division Head, or from the Coordinator of Academic Advising for students who have not declared a major. Resident students must also have their withdrawal form signed by an official in the Office of Student Services. Should the student leave the College without giving official notification, failing grades will be recorded for all courses.

Students who withdraw from the College in good academic standing may re-enter later by applying for readmission through the Office of Admissions. Students who are withdrawn due to low scholarship should refer to the section on Academic Standing.

DECLARATION OF MAJOR FOR FRESHMEN

All students who entered as Freshmen must formally declare a major or choose the status of an undeclared major in the second semester of the Freshman year. Prior to this declaration freshmen may change their area of interest by obtaining the necessary forms from the Office of Academic Advising. Although Early Childhood, Elementary Education, and Special Education majors may not be formally admitted into the Teacher Education Program until the second semester of the Sophomore year, they must confirm their continued interest in these majors by the same process used by the other Freshmen for declaration of their majors.

CHANGE OF MAJOR FOR UPPERCLASSMEN

Students may change majors at any time by obtaining a Change of Major card from the Office of the Registrar, securing the signatures of the department chairpersons involved, and filing the completed card with the Registrar.

DECLARATION OF MINOR

In order to be enrolled in any minor offered by the College, a student must declare the intended minor on forms available from the Office of the Registrar.

Certification that the requirements of the minor have been met is made on the Degree Application card by the department offering the minor. Approved minors are recorded on the transcript of the student upon graduation.

CREDIT BY EXAMINATION

The College encourages qualified students to meet certain graduation requirements through "Credit by Examination." Currently the College will award credit for successful completion of the College Level Examination Program's (CLEP) general or subject area examinations. In addition, certain departments offer their own examinations for which credit can be awarded. Additional information can be obtained from the Office of the Registrar.

TRANSFER OF CREDIT AFTER ADMISSION

In order for undergraduates in the Day Session to receive credit for courses taken at other institutions, approval must be obtained in advance from the appropriate department chairperson.

Application forms are available in the Office of the Registrar. Applications for approval of a course from another institution should be

accompanied by the appropriate catalogue from that institution. Transcripts of these approved courses must be submitted to the Registrar's Office within 6 weeks after the completion of the course. It is the student's responsibility to have official transcripts sent directly by the institution to the Office of the Registrar.

Grades of courses which are taken by matriculated undergraduate students through the Program of Continuing Education become a part of the student's record and thus are used in computing the Q.P.A.

PLAGIARISM

Academic honesty is expected of all students. Plagiarism and cheating are not condoned and are subject to an academic penalty, which may be failure for the course in which the violation took place. A record of the violation is kept and repeated offenses may result in suspension or dismissal from the College.

STANDARDS FOR REPRESENTING THE COLLEGE

In order to represent the College in intercollegiate competition, or as a member of the student government, a student must:

- Be in good academic standing.

- Be a full-time student, which is defined as carrying a minimum of 12 semester hours of credit.

- Not have completed undergraduate degree requirements.

- Have completed not more than eight full semesters in the day session.

- Such eight full semesters in the case of a transfer student include the number of semester's work granted in transfer credit.

DISMISSAL POLICIES

A student is admitted to Bridgewater State College in the expectation that he or she will accept and abide by the high standards of conduct and scholarship established by the faculty, administration and student governing boards. The College reserves the right to require any student to withdraw who does not maintain acceptable academic standing. The College also reserves the right to dismiss with due process a student who does not meet the requirements of conduct and order, or whose behavior is inconsistent with the standards of the College. The Student Handbook, *New Dimensions*, outlines all campus policies and may be obtained in the Office of Student Services.



The Graduate School



At graduation exercises in May, 1981, Dr. Frank J. Hilferty (left), Dean of Graduate and Continuing Education, and Vice-President for Student Services David Deep in Commencement Procession

THE GRADUATE SCHOOL

The Graduate School at Bridgewater State College acts as a coordinating institution among the several divisions and departments engaged in graduate instruction. The Graduate Dean, his fellow administrators, the Graduate Faculty, and the Graduate Education Council are responsible for the maintenance of uniform standards for higher degrees and certificates. As of January 1, 1980, approximately 1600 students were enrolled in graduate programs at Bridgewater.

The primary aim of the Graduate School is to produce graduates who are not only competent in their major field, but are also aware of their professional responsibilities. Another major goal is to foster research on the part of both faculty and students. Every graduate student is given the opportunity to engage in original investigation under the direction of a member of the faculty.

The Office of the Graduate School, which is located in Room 311 of the Maxwell Library, is open from 8:00 a.m. to 5:00 p.m., Monday through Friday, throughout the year except for legal holidays. Persons interested in working toward a master's degree or Certificate of Advanced Graduate Study (CAGS) on either a full-time or part-time basis should obtain a current copy of the College catalogue, together with appropriate application materials, at the Office of the Graduate School. Catalogues are bulk-mailed on a monthly basis to those who request them.

Students are strongly urged to familiarize themselves with the general policies, procedures, and program requirements of the Graduate School outlined in the following pages prior to enrolling in courses carrying graduate credit. For additional information relative to a specific graduate program, students should contact the appropriate Graduate Program Coordinator indicated in this catalogue. For general information in addition to that provided in the catalogue, students may make an appointment with a counselor by telephoning the Graduate School Office at 697-8321, Ext. 301. Official notification of such matters as acceptance, grades, and results of all examinations will be released by letter only.

GRADUATE PROGRAMS

MASTER OF ARTS

M.A. Programs Already Offered

The following six programs leading to the degree of Master of Arts are presently offered by Bridgewater State College:

Biology
History

Chemistry
Humanities

English
Speech Communication

MASTER OF ARTS (*continued*)

Joint M.A. Programs Planned Between Bridgewater State College and Southeastern Massachusetts University

Psychology

Sociology

The two joint programs, one in Psychology and one in Sociology, are being planned by Southeastern Massachusetts University and Bridgewater State College.

The Master of Arts in Psychology and the Master of Arts in Sociology have been approved by the College's Board of Trustees and the joint programs, when completed, will be submitted for the final approval of the Board of Regents of Higher Education.

After the joint programs have been approved - perhaps by the fall of 1982 - more complete information may be obtained by contacting either Bridgewater State College or Southeastern Massachusetts University.

MASTER OF ARTS IN TEACHING

Programs leading to the degree of Master of Arts in Teaching are offered in the following fields:

Behavioral Sciences	English	Mathematics
Biology	Foreign Languages	Physical Sciences
Chemical Sciences	Geography	Physics
Creative Arts (Art, Music, Speech Communication and Theatre)	History	Social Sciences (Eco- nomics, History, Political Science)
Earth Sciences	Humanities (English, Foreign Languages, Philosophy and Religious Studies)	Speech Communica- tion and Theatre

MASTER OF EDUCATION

Programs leading to the degree of Master of Education are offered in the following fields:

Counseling	Health Science	School Librarianship
Early Childhood Education	Instructional Media	Special Education
Elementary Education	Reading	
Elementary School Mathematics	School Adminis- tration	

MASTER OF SCIENCE

A program leading to the degree of Master of Science is offered in the following field:

Physical Education

CERTIFICATE OF ADVANCED GRADUATE STUDY (CAGS)

Programs leading to the CAGS are offered in the following fields:

Field of Concentration:
BEHAVIORAL SCIENCES

Areas of Study:

Anthropology
Psychology
Sociology

Field of Concentration:
CREATIVE ARTS

Areas of Study:

Art
Music
Speech Communication
and Theatre

Field of Concentration:
**NATURAL SCIENCES &
MATHEMATICS**

Areas of Study:

Biology
Chemistry
Earth Sciences
Geography
Mathematics
Physics

Field of Concentration:
EDUCATION

Areas of Study:

Counseling
Early Childhood Education
Elementary Education
Elementary School Mathematics
Health Science
High School, Middle School, &
Adult Education
Instructional Media
Physical Education
Reading
School Administration
School Librarianship
Special Education

ADMISSIONS

APPLICATION

An application is not complete and no applicant will be considered for admission unless all of the appropriate documents indicated below have been received by the Dean of the Graduate School (and a divisional/departmental interview held, if required) on or before the appropriate application deadline indicated in the College Calendar in this catalogue. *It is the responsibility of the student to make certain that all application documents are received in time.* Ordinarily, applications completed after a deadline will be considered at the next admission date.

The Graduate School admits students in November and May of each year. Students seeking admission to a program leading to a master's degree must hold a bachelor's degree from a four-year institution of acceptable standing. (College seniors may be admitted on a conditional basis.) Students seeking admission to a CAGS program must hold an appropriate master's degree from an institution of acceptable standing. Ordinarily, the master's degree must be in an area within the CAGS field chosen by the student.

Applicants should indicate a specific degree or certificate program (and also the area of study) when they request application forms. It is difficult for the Graduate School to send appropriate application forms without this information. Any student who has filed material for admission to a given graduate program or area of study, and subsequently decides to apply for admission to another program or area of study, should consult the paragraph on "Changes in Program" in this section of the catalogue.

All students seeking admission to a Master of Arts program, Master of Science program, and certain Master of Arts in Teaching and Master of Education programs (see departmental requirements) should request a formal interview with the coordinator of the program prior to the deadline for submitting applications. Voluntary interviews will be scheduled for those who elect to have them; applicants should contact the appropriate program coordinator.

Applicants to the Graduate School should make certain that the following are on file in the Office of the Graduate School:

- 1. An appropriate master's degree or CAGS application form.**
Application forms may be obtained from the Graduate Office.
- 2. Two official copies of all undergraduate and graduate transcripts.**
All transcripts must be sent by college registrars directly to the Dean of the Graduate School and must bear the seal of the College. Applicants who have attended more than one undergraduate college and/or graduate school should arrange to have duplicate transcripts of all course work, including grade results, sent directly to the Dean of the Graduate School. Graduates of Bridgewater State College should request the College Registrar to send transcripts to the Graduate Office. Applicants who have enrolled in Bridgewater's Program of Continuing Education should request the P.C.E. Office to send their transcripts to the Graduate Office.

Applicants who have successfully completed graduate courses, as well as those who hold a degree(s) in addition to the baccalaureate, must fulfill all application requirements as set forth in this catalogue. It should be noted that the successful completion of graduate courses prior to application shall not obligate the academic division/department or the Graduate School to recommend an applicant for acceptance.

3. The results of the Aptitude Test of the Graduate Record Examination — master's degree applicants only.

Master's degree applicants must arrange to have scores sent from the Educational Testing Service directly to the Dean of the Graduate School. Photocopies of scores and scores submitted by the applicant are not acceptable. Application forms and information relative to the Graduate Record Examinations may be obtained from the Graduate Office. Since up to six weeks may elapse between the test date and the receipt of scores, applicants should take the test well in advance of the Graduate School's deadline for receipt of completed applications. In addition, applicants for a Master of Arts program must submit the appropriate advanced test score. All applicants from countries where English is not an official language, must also submit scores on Educational Testing Service's Test of English as a Foreign Language (TOEFL) examination. Ordinarily, only students with TOEFL scores of 500 or better will be considered for admission.

All master's degree applicants must submit the results of the Graduate Record Examinations. In addition, students may submit Miller Analogies Test scores. Information relative to the Miller Analogies Test may be obtained by contacting the Continuing Education Office in the Maxwell Library.

4. Three letters of recommendation — master's degree applicants only.

Forms for recommendations are available at the Graduate Office. Only letters of recommendation submitted on these forms and sent by the reference directly to the Graduate School will be accepted. These letters indicate an estimate of the applicant's ability to pursue successfully a master's degree program in the proposed field or concentration. For M.A.T. and M.Ed. applicants at least two letters must be from faculty who have taught the applicant at the collegiate level (undergraduate or graduate). The third letter may be from a school administrator for whom the applicant has taught. Applicants who received the bachelor's degree more than five years prior to completing their application, may substitute other appropriate references if approved beforehand by the Graduate School. For M.A. and M.S. applicants at least two letters must be from persons who have taught the applicant in the appropriate area of concentration. The third M.A. letter may be from any faculty member who has taught the applicant at the collegiate level, while the third M.S. letter may be from any faculty member who has taught the applicant at the collegiate level or from a school administrator for whom the applicant has taught. Applicants for either the M.A. or M.S. who received the bachelor's degree more than five years prior to completing their application, may substitute other appropriate references if approved beforehand by the Graduate School.

5. Additional divisional/departmental requirements.

There may also be special divisional or departmental requirements relative to the application. Such requirements, if any, are to be found under each division's or department's description of its graduate program(s).

All correspondence and application material should be sent to the following address: Dean of the Graduate School, Graduate School Office, Bridgewater State College, Bridgewater, Massachusetts 02324.

Approximately one month prior to each application deadline for admission a notice will be sent to applicants listing the documents which have not been received. Applicants will be notified when their application folders are complete. All transcripts and other documents submitted become the property of the Graduate School and will not be returned. Copies of transcripts and other documents will not be issued from the Graduate School Office.

ACTION BY THE DIVISION/DEPARTMENT

The Dean of the Graduate School sends all completed applications to the academic division/department in which the applicant proposes to concentrate. After reviewing these applications, divisions and their departments make recommendations to the Graduate School.

Recommendations may include:

1. That the applicant be admitted to the Graduate School. Graduate students accepted with course deficiencies will be required to take prescribed undergraduate and/or graduate work without credit toward the degree or certificate.
2. That the applicant be admitted conditionally, pending the awarding of a baccalaureate. A college senior who is admitted to the program on a conditional basis should request his or her college to forward complete baccalaureate transcripts as soon as possible.
3. That the applicant not be admitted.

ACTION BY THE DEAN OF THE GRADUATE SCHOOL

The Dean, after reviewing the recommendations of the academic division/department, notifies the applicant of the action taken. This notification will be mailed in late November and May to November and May applicants, respectively.

GRADUATE ADVISORS AND PROGRAM PLANNING

Each graduate student who is accepted is assigned an advisor(s) representing the student's area of study. All master's degree and CAGS students accepted after September, 1980, are required by the Graduate School to enroll in the following program planning course, in addition to completing minimum credit requirements in their program.

GS 501 Graduate Program Planning

1 graduate credit

The planning and development of a coherent program of graduate study appropriate to the student's academic and professional background and objectives. Graduate students who have been accepted into a master's degree or CAGS program should enroll under the direction of their advisor(s) during their first term of course work after acceptance by the Graduate School. For details, students should contact their advisor(s) by mid-December, if accepted in November, and by the end of May, if accepted in May.

All accepted students will receive from the Graduate School copies of the form *Graduate Program Proposal*. Students are required to have a completed copy of this form sent to the Graduate School Office when applying to graduate. It should be noted that conferences with advisors may be difficult or impossible to arrange during holidays and college vacations, and during the months of June, July, and August.

CHANGES IN PROGRAM

Any request to change from one graduate program to another must be made prior to the deadline for receiving completed applications as indicated in the College Calendar. Students wishing to change programs should request the Graduate School in writing to review their file to determine what additional material needs to be submitted. Students requesting a change in program should be aware that their original date of acceptance by the Graduate School will not change. Appropriate credits earned prior to a program change may be transferred to the new graduate program with the approval of the new advisor.

GENERAL POLICIES and PROCEDURES

Students are responsible for all information given in the latest edition of the catalogue and also for any notices posted on the bulletin boards of the Graduate School, the Program of Continuing Education, the Library, and the academic departments.

CHANGE OF NAME AND/OR ADDRESS

Students should promptly notify the Office of the Graduate School of any change in name or address by using the appropriate form. Failure to do this may cause unfortunate complications and delays which inconvenience students. Forms are available at the Office of the Graduate School.

DEADLINES

Students are reminded to consult the annual College Calendar for deadlines and dates relative to such matters as: admissions, Graduate Record Examinations, comprehensive examination requests, approval of transfer credit, and filing applications to graduate. This Calendar is printed in the front of the college catalogue.

TIME LIMITS — PROGRAM AND COURSE

All graduate program requirements must be completed within six years of the date of the student's acceptance. In addition, no graduate course offered for master's degree or CAGS credit may be more than six years old at the time program requirements are completed.

COURSE REGISTRATION

Graduate course work is offered through both the Program of Continuing Education and the Day Session on either a full-time or part-time basis. Most students complete their graduate work in approximately three years. All students should realize that it is not possible to set an absolute deadline for completing a graduate program. This is due to such factors as the College's need to reserve the right to cancel any course for which there is insufficient enrollment.

All students who have been accepted in a graduate program and who plan to enroll in course work offered through Continuing Education should preregister by mail. Registration forms are attached to the Continuing Education brochure which is printed prior to the beginning of each term. All students who plan to enroll in course work offered through the Day Session should contact the Graduate School Office for specific registration information well in advance of the beginning of the term. A registration form must be completed by the student and approved by the Graduate School Office prior to being submitted by the student at registration. A transcript indicating completion of the bachelor's degree must also be submitted to the Graduate School.

Full-time graduate study is defined, for academic purposes only, as being enrolled for nine or more graduate credits in a given term in the Day Session and/or Continuing Education. Part-time graduate study is defined, for academic purposes only, as being enrolled for less than nine graduate credits in a given term in the Day Session and/or Continuing Education. Ordinarily, students should not register for more than twelve undergraduate and/or graduate credits during the fall or spring term. Graduate students may not register for more than two courses (6-8 credits) during each summer session. Any graduate student who earns more than the permitted number of credits allowed in a given term or summer session may not apply more than the permitted maximum number of credits toward the degree.

PROGRAM AND COURSE PREREQUISITES

Program prerequisites may be required to ensure adequate preparation for graduate work in the area of study. These prerequisites may be fulfilled after the applicant's acceptance by the Graduate School. Certain advanced courses require that students have completed specific prerequisite courses.

GRADING SYSTEM

Graduate course achievement will be rated A (Excellent), B (Good), C (Poor but passing), F (Failure), W (Withdrawn), INC (Incomplete), or AU (Audit).

WITHDRAWAL FROM PROGRAM

Students who decide to withdraw from a graduate program should notify the Graduate School of their intentions in writing as soon as possible. (Students should also consult course withdrawal procedures and refund policies indicated elsewhere in this catalogue.)

ACADEMIC DISMISSAL

Students who earn grades of C or below in more than two graduate courses (i.e., any course in which the student enrolls for graduate credit after acceptance in a program) must withdraw from the program unless special permission to continue is recommended by the advisor, the major division/department, and the Dean of the Graduate School.

GRADUATE AND UNDERGRADUATE CREDIT

Courses at Bridgewater with 500 level numbers carry graduate credit and are open only to graduate students. Certain courses numbered below 500 may be taken for either graduate or undergraduate credit. Graduate School guidelines for faculty teaching these latter courses indicate that advanced work should be required of graduate students. The guidelines recommend that more rigorous examinations and more sophisticated term papers should be expected to take into account the different quantitative and qualitative standards associated with graduate study.

The level of credit earned in a course must be that designated by the student at the time of registration. Requests for credit level changes must be received by the Office of Continuing Education prior to the beginning of the fourth meeting of a class. For Day Session courses, requests for credit level change must be received by the Graduate Office prior to the beginning of the fourth week of the semester. Ordinarily, a student who has not completed all requirements for the baccalaureate may not enroll in any course for graduate credit. Seniors at Bridgewater State College in their last semester of course work may be permitted, with the approval of the undergraduate advisor and the Graduate Education Council, to enroll in courses for graduate credit.

TRANSFER CREDIT

Transfer credit at the graduate level is defined at Bridgewater to include two distinct credit situations. First, transfer credit is defined as being any appropriate graduate credit taken at Bridgewater State College or at another accredited institution *prior to acceptance* to a Bridgewater graduate program. This includes appropriate graduate credit earned in courses in which the student is enrolled at the time of acceptance. Second, transfer credit is defined to include appropriate graduate credit taken at an accredited institution other than Bridgewater State College *after acceptance* to a Bridgewater graduate program. All courses to be used as transfer credit in a graduate program must have the approval of the advisor and be recorded on the student's *Graduate Program Proposal*. Details regarding the matter of transfer credit as it applies to Bridgewater's master's degree and CAGS programs are provided below.

Transfer Credit — Master's Degree Programs

A student who has enrolled in appropriate courses at Bridgewater or at another accredited institution prior to acceptance by the Graduate School may request that up to fifteen graduate credits (*including any credits earned in courses in which the student is enrolled at the time of acceptance*) be accepted in partial fulfillment of degree requirements. Approval is

subject to the following conditions: 1) that not more than six of the fifteen credits being transferred are from an institution accredited at the graduate level other than Bridgewater State College; 2) that a grade of B or better has been earned in all courses enrolled in prior to the student's acceptance by the Graduate School; and 3) that courses being transferred have not been used for fulfilling the requirements of another degree or certificate. A form entitled *Petition for Acceptance of Transfer Credit* is sent to the student by the Graduate School Office at the time of acceptance. If courses enrolled in prior to acceptance are to be applied toward fulfillment of requirements for a master's degree, the student must submit the above form no later than the deadline indicated in the College Calendar. It should be noted that all transfer courses are subject to the regulation governing time limits — no graduate course offered for the degree may be more than six years old when degree requirements are completed.

After a student has been admitted to a master's degree program, a maximum of six graduate credits of grade B or better, taken at an institution accredited at the graduate level other than Bridgewater State College, may be transferred if approved by the advisor. It should be noted, however, that of the total number of credits offered for the degree, taken both prior to and after acceptance, not more than six can be transferred from other graduate schools. Two official transcripts of courses taken at another institution after acceptance must be sent directly to the Bridgewater State College Graduate School.

Transfer Credit — CAGS Programs

A student who has enrolled in appropriate courses at Bridgewater or at another accredited institution after completion of a master's degree and prior to acceptance in a CAGS program may request that up to six graduate credits be accepted in partial fulfillment of CAGS requirements. This includes credit earned in courses in which the student is enrolled at the time of acceptance (CAGS in Education applicants, who must enroll in ED 570 CAGS Seminar prior to review of their application, may request that up to six graduate credits in addition to ED 570 be accepted as transfer credit.) A grade of B or better is required of all courses being transferred. A form entitled *Petition for Acceptance of Transfer Credit* is sent to the student by the Graduate School Office at the time of acceptance. If courses enrolled in prior to acceptance are to be applied toward fulfillment of CAGS requirements, the student must submit the above form no later than the deadline indicated in the College Calendar. It should be noted that all transfer courses are subject to the regulations governing time limits — no graduate course offered for the CAGS may be more than six years old when certificate requirements are completed.

After a student has been admitted to a CAGS program, a maximum of six graduate credits of grade B or better, taken at an institution accredited at the graduate level other than Bridgewater State College, may be transferred if approved by the advisor. It should be noted, however, that of the total number of credits offered for the CAGS, taken both prior to and after acceptance, not more than six can be transferred from other graduate

schools. Two official transcripts of courses taken at another institution must be sent directly to the Bridgewater State College Graduate School.

GRADUATE ASSISTANTSHIPS

As indicated below, the Graduate School offers a limited number of assistantships, subject to availability of funds as determined by the College's budget, in areas associated with certain graduate programs of the College.

Graduate Assistantships Available

<i>Area of Assistantship</i>	<i>Associated B.S.C. Graduate Program</i>	<i>Assistantship Administrator</i>
Career Planning and Placement	Counseling preferred	Mr. Denny Ciganovic Director of Placement
Counseling and School Administration	All Education programs	Dr. Ray Harper, Division Head, Div. of Professional Ed.
Health Science	Health Science	Dr. Catherine Comeau, Coordinator, Health and Physical Ed.
Inservice Education	All Education programs	Dr. Ray Harper, Division Head, Div. of Professional Ed.
Laboratory School Education	All Education programs	Dr. L. Stephen Traw, Associate Dean, Burnell Lab School
Natural Sciences and Mathematics	All Natural Science and Mathematics programs	Dr. Kenneth Howe, Division Head, Div. of Natural Sciences and Mathematics
Physical Education	Physical Education	Dr. Catherine Comeau, Coordinator, Health and Physical Ed.
Student Services	Counseling preferred	Mr. David Deep, Vice President, Student Services
Student Union Management	Counseling	Dr. Richard Veno, Director of the Student Union

For information about Residential Housing Assistantships, in which graduate students are encouraged but not required to enroll in a degree program, see the *Housing* section of this catalogue.

Eligibility

Only those who have been accepted into a Bridgewater graduate program are eligible to be awarded an assistantship.

Application

Application forms and detailed descriptions of the specific graduate assistantships listed above may be obtained from the Graduate School Office. Completed assistantship applications should be returned to the appropriate administrator indicated in the table above. Deadlines for assistantship applications are provided in the assistantship descriptions.

Selection of Assistants

After an assistant has been selected by the assistantship administrator, a recommendation is forwarded to the Graduate Dean. Those applicants who are awarded an assistantship will receive a letter of appointment from the Dean of the Graduate School.

Duration

Assistantships are held for a specified period of time and may include summer sessions. Subject to availability of funds, assistantships may be renewed upon the request of the assistantship administrator, satisfactory performance of duties, and maintenance of acceptable standing in a graduate program.

Compensation

Graduate assistants receive a stipend of \$3,600.00 per academic year (September-June) and \$700.00 for each of the two summer sessions, unless otherwise indicated in the assistantship description. Assistants will receive tuition and fee remission for twelve credits of course work during each of the fall and spring semesters, and for six credits during each of the two summer sessions, if applicable. Ordinarily, recipients are expected to work a minimum of 20 hours per week. Partial assistantships are pro-rated in terms of stipends and work hours.

INDEPENDENT STUDY

Each division's/department's graduate offerings include two courses in which a student who has been accepted in a graduate program and who meets the course prerequisites can pursue independent study under the direction of a faculty advisor.

—502 Research

Credit to be arranged

Original research undertaken by the graduate student in his or her field. The student's investigations ordinarily culminate in a thesis. The number of credits awarded for the research may vary, and the student may repeat the course until a maximum of 9 credits in an M.A. program and 6 credits in an M.A.T., M.Ed., M.S., or CAGS program is earned toward the minimum credit requirements for the degree.

Degree program graduate students who wish to enroll in *Research* must complete and file with the Graduate Office the Graduate School form *Approval of Thesis Topic and Outline*. A Graduate School letter of approval to enroll in —502 should be requested.

—503 Directed Study

Credit to be arranged

This course is designed for the graduate student who desires to study selected topics in his or her field. The number of credits awarded for *Directed Study* may vary, and the student may repeat the course until a maximum of 6 credits is earned.

Students who wish to enroll in *Directed Study* should obtain the form *Request for Directed Study* at the Graduate School Office. The completed form should be presented at registration.

Enrollment in a *Directed Study* ordinarily is limited to students who have been accepted to a graduate program at Bridgewater State College and who have completed a minimum of 15 approved graduate credits.

THESIS

All M.A. students, and those M.A.T., M.Ed. and M.S. students who elect to submit a thesis, should obtain a copy of the brochure entitled *The Master's Thesis* from the Office of the Graduate School.

The major function of the thesis is to contribute to the student's scholarly development. In seeking approval of a thesis topic, the student is expected to demonstrate to those whose approval is required that the topic is significant and that execution of the work will further their educational growth. Each graduate student should confer with their advisor at the earliest opportunity relative to the thesis topic and outline. It is essential

that the student work closely with the advisor in all matters related to the thesis.

The student's thesis committee is comprised of at least three faculty members, including a thesis committee chairperson appointed by the graduate program coordinator. All thesis committee appointments should follow consultation with the student's advisor and the student.

It is the responsibility of the student to obtain from the Graduate Office three copies of the form *Approval of Thesis Topic and Outline* and submit the completed copies to the advisor for approval by the members of the student's thesis committee. The student's thesis committee chairperson should retain the original copy of the completed form and should return the remaining two copies to the student. The student retains one copy for his or her records and submits the other to the Graduate School Office in order to be eligible to register for thesis credit under the course heading *Research*. (If the student, with the approval of the thesis committee, changes the thesis topic, revised copies of the above form must be filed).

Students should refer to the course entitled *Research* which appears in this catalogue under their major department and in this section under *Independent Study*, as well as consult with their advisor, relative to the matter of earning credit for research done in conjunction with a thesis. Students must be enrolled in *Research* during any period in which a faculty member is directing the thesis.

Three unbound copies of the thesis must be deposited in the Office of the Graduate School no later than the completion of all other degree requirements. Each copy must contain an abstract of the thesis, with the abstract immediately following the title page of the thesis. The Office of the Graduate School arranges for the binding of theses. A fee of \$10.00 per copy is charged. Checks should be made payable to: *Library Development Trust Fund*.

COMPREHENSIVE EXAMINATION

While students are expected to make satisfactory progress in their course work, the accumulation of credit hours is not regarded as the sole index of progress or as a guarantee that the master's degree or CAGS will be granted. Students must give evidence that they can integrate information and ideas from the various areas of their major field. The principal instrument for measuring this achievement is the Comprehensive Examination. This examination may be written and/or oral, as determined by the student's division/department. It is based upon the major area(s) of study, as well as related areas, and may include work done on a thesis. A student who plans to take the Comprehensive Examination should file the Graduate School form entitled *Examination Request*. This form should be completed and filed by the student in the Graduate Office no later than the deadline indicated in the College Calendar. Comprehensives are given

during the months of November and April only. Ordinarily, the examination may not be taken prior to the last term of course work.

Students who fail the Comprehensive Examination shall be given one further opportunity to take it after they have made substantial progress in whatever additional work may be prescribed by the advisor. The second Comprehensive Examination may not be taken prior to the next official examination period. Students must file a new *Examination Request* form prior to the next applicable deadline indicated in the College Calendar. Those who take the Comprehensive Examination will be notified of the results by mail.

APPLICATION TO GRADUATE

Students who are nearing the completion of their graduate program requirements and who plan to receive a master's degree or CAGS in February, May, or August, should request the form *Application to Graduate* from the Graduate Office. This form should be completed by the student and filed, together with the candidate's *Graduate Program Proposal*, approved by the faculty advisor, in the Graduate School Office no later than the deadline indicated in the College Calendar. Failure to file before the deadline will ordinarily postpone degree conferral. A Commencement Fee of \$11.00 (plus an additional fee for academic regalia for students attending commencement exercises) is required at the time of filing the *Application to Graduate*. Checks should be made payable to the *Bridgewater Commencement Fund*.

No degree or certificate will be conferred and no graduate transcripts will be issued unless all tuition and fees have been paid in full.

Diplomas are awarded at May Commencement and also during the months of February and August. Students who receive their diplomas in February or August, as well as those who complete their degree work in May, should plan to attend May Commencement and wear appropriate academic regalia. Information relative to Commencement is mailed in early May to students who will be attending graduation exercises.

In the event that a student does not receive the degree at the anticipated time, a new *Application to Graduate* form must be filed prior to the next applicable deadline indicated in the College Calendar.

GRADUATE PROGRAM REQUIREMENTS

MASTER OF ARTS

General Requirements

Credit requirements for the Master of Arts degree shall be a minimum of thirty approved graduate credits, including a thesis approved by the department, in addition to a one-credit program planning course to be taken under the direction of an advisor upon acceptance in the program. All credits must have the advisor's endorsement. The thesis should include results of original research and give evidence of acceptable scholarship. No more than nine credits associated with a thesis may be used to meet the minimum credit requirements for the degree. Each student must enroll in the research course (—502) listed under the major department. Students should consult the sections in this Catalogue entitled *Thesis* and *Independent Study* and request the brochure entitled *The Master's Thesis* from the Graduate School Office. Ordinarily, at least one-half of the degree credits should be earned in courses limited to graduate students (500 level).

Preliminary Examination

In some departments, a Preliminary Examination is given during the semester following the successful completion of twelve credits (including transfer credits) of approved graduate work. This examination may be written and/or oral. Its purposes are: 1) to determine the degree of skill achieved in relating and integrating graduate work completed to date; 2) to ascertain the readiness of the student for additional graduate work; and 3) to enable the advisor to plan the remainder of the student's program. The Graduate School will apprise students of their performance on the Preliminary Examination. Unsatisfactory performance may require additional course work and a second examination. If a student fails to perform satisfactorily a second time, he or she will be dropped from the degree program.

Research Proficiency Examination

Students are expected to demonstrate competence with a research tool appropriate to their program, such as a reading knowledge of a foreign language, computer programming, or statistics. Students should consult with their advisor and major department relative to specific departmental requirements and procedures.

Comprehensive Examination

All students are required to pass a comprehensive examination. For details, see the paragraph in this section of the catalogue entitled *Comprehensive Examination*.

MASTER OF ARTS IN TEACHING

General Requirements

Credit requirements for the M.A.T. degree, which is offered through the academic divisions and departments of the College, and the Department of High School, Middle School, and Adult Education, shall be a minimum of thirty approved graduate credits, in addition to a one-credit program planning course to be taken under the direction of an advisor upon acceptance in the program. Students should consult the appropriate divisional and departmental sections of this catalogue. Degree credits must have the endorsement of the appropriate advisor. A thesis is optional in Master of Arts in Teaching programs. A maximum of six credits may be earned in conjunction with a thesis. The student's work should include results of original research and give evidence of acceptable scholarship. Each student who elects to do a thesis should enroll in the research course (—502) listed under the major department. Students should consult the sections of this catalogue entitled *Thesis* and *Independent Study* and request the brochure entitled *The Master's Thesis* from the Graduate School Office. Ordinarily, at least one-half of the degree credits should be earned in courses limited to graduate students (500 level).

Elective Courses

The degree of Master of Arts in Teaching is designed primarily to meet the varied needs of graduate students who are currently teaching or intend to teach at the secondary level or community/junior college level. Emphasis is placed on providing appropriate breadth and depth in the student's field of interest as well as in the field of education. The balance between courses in education and the subject field is determined by the student's background.

At the time of acceptance students will be assigned an advisor from the academic area in which they are concentrating and an advisor from the Department of High School, Middle School, and Adult Education. All electives in the academic area of study should be approved by the student's advisor in that academic area prior to registration. All electives in education to be taken for degree credit should be approved by the student's education

Graduate Program Requirements

advisor prior to registration. Students not yet accepted to an M.A.T. program should consult with the appropriate academic and education coordinators for course selection and approval.

Each student, in consultation with advisors, elects courses which meet his or her professional needs. Ordinarily, at least 18 graduate credits should be elected from the academic area (and related areas) in which the student is concentrating. In addition, at least one course taken for graduate credit should be elected from each of the following areas of professional study:

RESEARCH METHODS AND FINDINGS

- GC 500 Research and Evaluation
- ED 591 Research in the Classroom Teaching of Language Arts
- ED 592 Research in the Classroom Teaching of Social Sciences
- ED 593 Research in the Classroom Teaching of Mathematics
- ED 594 Research in the Classroom Teaching of Science

HUMANISTIC STUDIES

- ED 310 Aims and Philosophy of Secondary Education
- ED 382 Comparative Education
- ED 383 International Education
- ED 480 Philosophy of Education
- ED 505 Historical Foundations of Education
- ED 580 Philosophical Foundations of Education
- ED 583 Directed Study in the Philosophy of Education

BEHAVIORAL STUDIES

- ED 520 Psychological Foundations of Education
- ED 523 Directed Study in Educational Psychology
- ED 590 Sociological Foundations of Education

TEACHING THEORY

- ED 412 Strategies for Teaching Social Studies in the High School
- ED 414 Strategies for Teaching English in the High School
- ED 416 Strategies for Teaching Earth Sciences in the High School
- ED 417 Strategies for Teaching Geography in the High School
- ED 419 Strategies for Teaching Physical Science in the High School
- ED 421 Strategies for Teaching Biology in the High School
- ED 422 Strategies for Teaching Mathematics in the High School
- ED 424 Strategies for Teaching Foreign Language in the High School
- ED 425 Strategies for Teaching Art in the High School
- ED 426 Strategies for Teaching Speech & Theatre in the High School
- ED 440 Methods and Materials in Secondary Education
- ED 443 Secondary School Curriculum
- SA 571 Introduction to Theory and Understanding of
Group Interaction

Teaching Requirement

All students enrolled in a program leading to the degree of Master of Arts in Teaching are required to fulfill the degree requirement of teaching experience. This requirement may be met, unless otherwise indicated in this catalogue under the departments in which the student is concentrating, by one of the following procedures:

1. **TEACHING EXPERIENCE.** One full semester of successful classroom teaching experience at the appropriate level as a full-time employee in an accredited public or private school. (In order to document this experience, students should submit the completed form entitled *Certificate of Teaching* to the Graduate School. This form is available at the Graduate Office.
2. **STUDENT TEACHING.** A minimum of 6 credits of student teaching earned at an institution of acceptable standing prior to or after acceptance in a master's degree program at Bridgewater State College. This experience may have been at either the undergraduate or graduate level. Credits earned in conjunction with student teaching may not ordinarily be used to meet the minimum graduate credit requirements for the degree.
Those who plan to student teach through Bridgewater State College after acceptance should familiarize themselves with the policies regarding *Admission to the Teacher Education Program* (see the Division of Professional Education's statement in this catalogue.) Students should meet the prerequisites for the student teaching course most appropriate to their program. *Students must request the Graduate School to certify their eligibility to student teach by letter to the Office of Teacher Preparation.* The student must register for supervised teaching through Teacher Preparation and the Registrar's Office after the application for student teaching has been approved.
3. **CERTIFICATION.** The possession of an appropriate teacher certificate issued by the Department of Education of the Commonwealth of Massachusetts.

Comprehensive Examination

All students are required to pass a comprehensive examination. For details, see the paragraph in this section of the catalogue entitled *Comprehensive Examination*.

Certification Information

Teacher certification is granted by the Massachusetts State Department of Education. Students who wish to be certified in the Commonwealth should direct their inquiries to Bridgewater's Office of Student Teaching and Certification, Room 120, Burrill Avenue Academic Office and Classroom Building, or to the Director of Teacher Certification, Department of Education, 31 St. James Avenue, Boston, MA 02116. Students should consult with their education advisor if they wish to meet State certification requirements while they are enrolled in an M.A.T. program.

It should be noted that requirements for the certification of educational personnel in Massachusetts are being substantially modified. This in turn is necessitating corresponding changes in requirements for programs which include certification. Students graduating after August 1982 should consult with the appropriate graduate program coordinator concerning changes in program requirements. Programs leading to initial certification will include a full semester of student teaching. Programs leading to an additional certificate (other than in a new field) will require the equivalent of a half-semester practicum.

MASTER OF EDUCATION

General Requirements

Credit requirements for the degree shall be a minimum of thirty approved graduate credits, unless otherwise indicated by the department, in addition to a one-credit program planning course to be taken under the direction of an advisor upon acceptance in the program. Students should consult the appropriate departmental section of this catalogue. Degree credits must have the endorsement of the advisor. A thesis is optional in most Master of Education programs. A maximum of six credits may be earned in conjunction with a thesis. The student's work should include the results of original research and give evidence of high scholarship. Each student who elected to do a thesis should enroll in the research course (—502) listed under his major department. Students should consult the section of the catalogue entitled *Thesis and Independent Study* and request the brochure entitled *The Master's Thesis* from the Graduate School Office. Ordinarily, at least one-half of the degree credits should be earned in courses limited to graduate students (500 level).

Required and Elective Courses

Each program leading to the degree of Master of Education provides graduate students with a curriculum designed to meet their professional needs. In addition to course work in the area of specialization and related fields, each student must elect for graduate credit at least one course from each of the following areas of professional study:

RESEARCH METHODS AND FINDINGS

Specific course requirements for this area of study are listed under the various departmental M.Ed. program descriptions.

HUMANISTIC STUDIES

- ED 382 Comparative Education
- ED 383 International Education
- ED 480 Philosophy of Education
- ED 505 Historical Foundations of Education
- ED 580 Philosophical Foundations of Education
- ED 583 Directed Study in the Philosophy of Education

BEHAVIORAL STUDIES

- ED 520 Psychological Foundations of Education
- ED 523 Directed Study in Educational Psychology
- ED 590 Sociological Foundations of Education

Additional M.Ed. course requirements are listed under the various departmental program descriptions in this catalogue. All courses to be offered in fulfillment of degree requirements must be approved by the student's advisor.

Teaching Requirement

All students enrolled in a M.Ed. program preparing them for a classroom position ordinarily must fulfill the degree requirement of teaching experience. This requirement may be met, unless otherwise indicated in this catalogue under the department in which the student is concentrating, by one of the following procedures:

1. **TEACHING EXPERIENCE.** One full semester of successful classroom teaching experience at the appropriate level as a full-time employee in an accredited public or private school. (In order to document this experience, students should submit the completed form entitled *Certificate of Teaching* to the Graduate School. This form is available at the Graduate Office).

2. **STUDENT TEACHING.** A minimum of 6 credits of student teaching earned at an institution of acceptable standing prior to or after acceptance in a master's degree program at Bridgewater State College. This experience may have been at either the undergraduate or graduate level. Credits earned in conjunction with student teaching may not ordinarily be used to meet the minimum graduate credit requirements for the degree.
Those who plan to student teach through Bridgewater State College after acceptance should familiarize themselves with the policies regarding *Admission to the Teacher Education Program* (see the Division of Professional Education's statement in this catalogue.) Students should meet the prerequisites for the student teaching course most appropriate to their program. *Students must request the Graduate School to certify their eligibility to student teach by letter to the Office of Teacher Preparation.* The student must register for supervised teaching through the Teacher Preparation and the Registrar's Office after the application for student teaching has been approved.
3. **CERTIFICATION.** The possession of a certificate appropriate to the student's area of specialization issued by the Department of Education of the Commonwealth of Massachusetts.

Comprehensive Examination

All students are required to pass a comprehensive examination. For details, see the paragraph in this section of the Catalogue entitled *Comprehensive Examination*.

Certification Information

Certification is granted by the Massachusetts State Department of Education. Students who wish to be certified in the Commonwealth should direct their inquiries to Bridgewater's Office of Student Teaching and Certification, Room 120, Burrill Avenue Academic Office and Classroom Building, or to the appropriate division of the Department of Education, 31 St. James Avenue, Boston, Massachusetts, 02116. Students should consult with their major advisor if they wish to meet State certification requirements while they are enrolled in a M.Ed. program.

It should be noted that requirements for the certification of educational personnel in Massachusetts are being substantially modified. This in turn is necessitating corresponding changes in requirements for programs which include certification. Students graduating after August 1982 should consult with the appropriate graduate program coordinator concerning changes in

program requirements. Programs leading to initial certification will include a full semester of student teaching. Programs leading to an additional certificate (other than in a new field) will require the equivalent of a half-semester practicum.

MASTER OF SCIENCE

General Requirements

The degree of Master of Science is offered in the field of Physical Education. For information regarding this degree, consult the requirements outlined under the Department of Health, Physical Education, and Recreation.

CERTIFICATE OF ADVANCED GRADUATE STUDY (CAGS)

General Requirements

Bridgewater's CAGS programs are designed to meet the well defined career needs of professionals who have earned an appropriate master's degree and who wish to attain greater competence in a combination of areas of study within one of the major CAGS fields — Behavioral Sciences, Creative Arts, Education, or Natural Sciences and Mathematics. Each student's CAGS program will be individually planned under the direction of an advisor and will focus on the academic background, present position, and professional needs of the student, constituting an integrated whole rather than a random assortment of courses. Details regarding the CAGS curriculum, including information about required and elective courses, may be found in the CAGS program descriptions which appears in this catalogue under the Divisions of Behavioral Sciences, Humanities and Creative Arts, Natural Sciences and Mathematics, and Professional Education, respectively.

Credit requirements for the CAGS shall be a minimum of thirty approved graduate credits, in addition to a one-credit program planning course to be taken under the direction of an advisor upon acceptance in the program. Courses taken for the CAGS may not repeat work previously accomplished by the student in either his or her undergraduate or graduate degree work. Ordinarily, at least one-half of the CAGS credits must be earned in courses limited to graduate students (500 level).

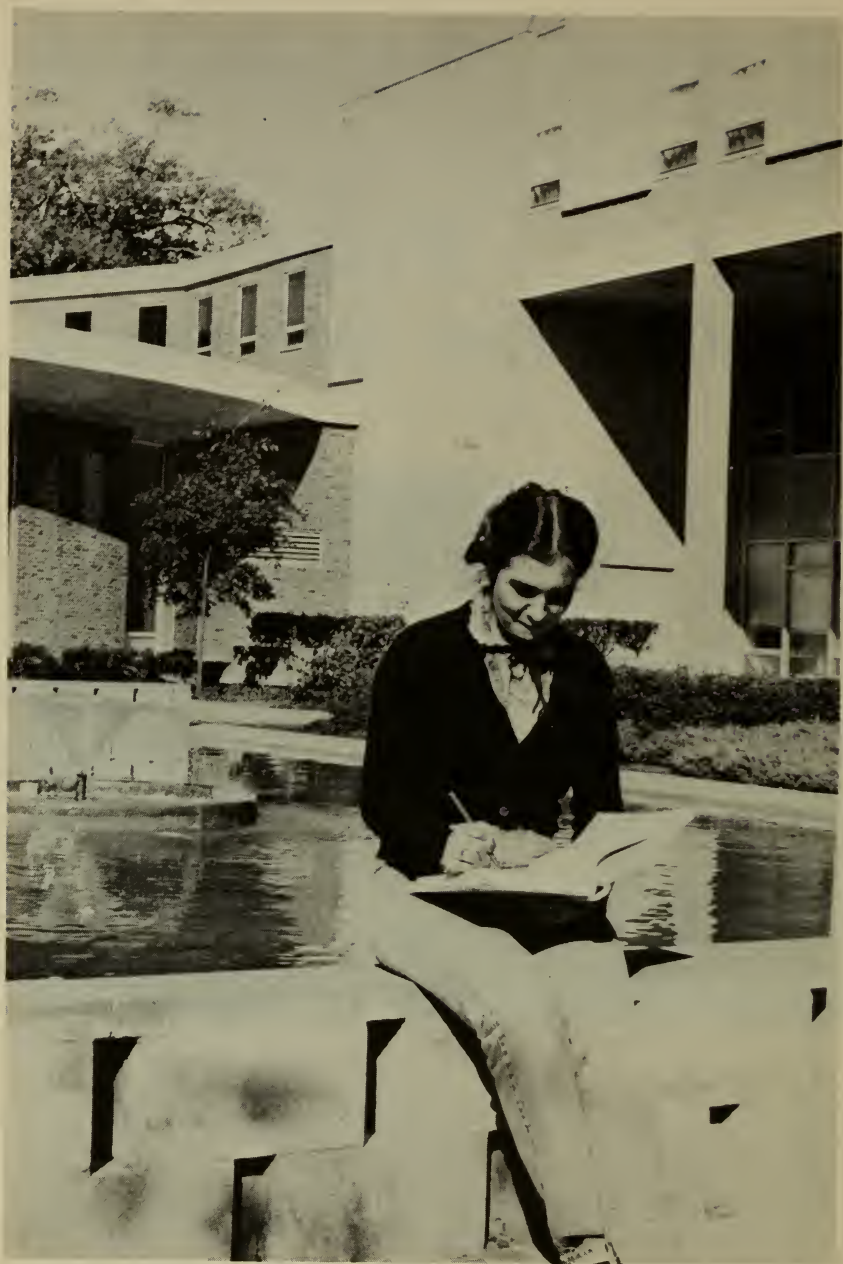
Comprehensive Examination

All CAGS students are required to pass a comprehensive examination. For details, see the paragraph in this section of the Catalogue entitled *Comprehensive Examination*.

Program & Course Offerings



The new major in Aviation Science is officially inaugurated with the signing of the agreement between Bridgewater State College and Wiggins Airways of Norwood, Massachusetts. Mr. Joseph Garside, Wiggins President, affixes his signature as College President Dr. Adrian Rondileau (second from left) watches. Also observing are Dr. Kenneth Howe, extreme left, Head, Division of Natural Sciences and Mathematics, and Dr. Wallace Anderson, far right, Vice-President of Academic Affairs at Bridgewater State College



GENERAL INFORMATION

The following section presents the academic divisions of the College and their departments. Each department's undergraduate and graduate programs are outlined, together with a listing of its course offerings.

The course offerings include all courses which are taught at the College — both through the Day Session and the Program of Continuing Education. At present, the large majority of the 500 level courses are offered only through the Program of Continuing Education. Students are urged to consult the Day Session's *Schedule of Courses* and the Continuing Education brochure each semester to see when specific courses are offered.

Students should consult the Undergraduate or Graduate sections of this catalogue for information on academic regulations applicable to their degree.

Regulations concerning the refund policy for tuition and fees are found in the section of this catalogue entitled *Tuition and Fees*.

COURSE NUMBERING SYSTEM

- | | |
|-----------|--|
| 100 - 299 | Introductory courses or courses normally taken in the freshman and sophomore years. |
| 300 - 399 | Courses normally taken in the junior or senior years — open to graduate students unless otherwise noted. |
| 400 - 499 | Courses normally taken by seniors — open to graduate students unless otherwise noted. |
| 500 - 599 | Open only to graduate students. |

Courses which may not be taken by graduate students for graduate credit are indicated as part of each graduate program description.

Usually, courses offered in the fall semester are odd-numbered; those offered in the spring semester are even numbered. Courses offered both semesters usually end in zero.

PREREQUISITES

Students should make certain that they have the necessary prerequisites for each course. Failure to do so may result in being inadequately prepared to take the course, and may result in the loss of any credit earned in the course. Prerequisites are indicated after the abbreviation "Prq." in each course description.

MEETING TIMES

Unless specified otherwise, Day Session courses meet for three 50-minute periods or two 75-minute periods per week for one semester, and count for three credits. Departures from this rule, such as laboratory and studio periods and quarter courses, are indicated in the course descriptions and schedule of courses.

Courses offered through the Program of Continuing Education normally meet once a week for a three-hour period. Exceptions are noted in the Continuing Education brochure.

Division of Behavioral Sciences

Psychology, Sociology and Anthropology, Social Work

Division Head: Dr. Morgan C. Brown

UNDERGRADUATE PROGRAMS

Undergraduate programs of study within the Division of Behavioral Sciences are provided by the Departments of Psychology, Social Work, and Sociology and Anthropology.

Students within the Division receive intensive instruction in the scientific study of cultures, personality, individual and group behavior, social work procedures, and research techniques useful in social work, anthropological, psychological, and sociological study.

Graduates of the Division of Behavioral Sciences find employment in social work and community service agencies, psychological clinics and related settings in urban areas. Some pursue graduate and professional training. Others engage in secondary school teaching.

GRADUATE PROGRAMS

Master of Arts in Teaching

The Division offers a program leading to the degree of Master of Arts in Teaching with a concentration in the behavioral sciences, which is designed primarily to meet the varied needs of graduate students who are currently teaching or intend to teach at the secondary level. All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. Degree requirements include a minimum of 12 appropriate graduate credits in designated areas of professional study (consult M.A.T. degree requirements in the Graduate School section of this catalogue), and a minimum of 18 appropriate graduate credits in the behavioral sciences (approved by the program advisor on the basis of the background, interests, and needs of the student).

Applicants to the degree program must be interviewed prior to being considered for admission. Students should contact the Head of the Division. Applicants for admission will be screened by the appropriate graduate committee.

As part of their application to the program, students must show evidence in their background of a minimum of 18 credits in the behavioral sciences (anthropology, psychology, and sociology), with at least 3 credits earned in each of the three fields. In addition, students must have completed a minimum of 3 credits in statistics or computer science.

Students admitted to the program must enroll in BH 501 and will be expected to develop a concentration or "specialty" within the behavioral sciences. The concentration or "specialty" will be based upon the interests of each student. After completing 12 graduate credits offered by the Division, each student will be given a qualifying examination covering issues (theories and problems) in the three disciplines. A "teaching thesis" also will be prepared. The student will be given an oral examination covering the thesis as part of his or her comprehensive exam.

In meeting program requirements, the following courses are strongly recommended:

- AN 323 Anthropological Theory
- SO 400 Seminar: Social Theory
- SO 402 Seminar: Research Methods in Sociology

(One or more of the following courses in psychology)

- PY 310 Social Psychology
- PY 319 History of Psychology
- PY 325 Cognitive Development
- PY 342 Physiological Psychology

- PY 360 Psychology of Personality
- PY 370 Abnormal Psychology
- PY 415 Psychological Theory
- PY 500 Advanced General Psychology
- PY 506 Advanced Research Methods

Certificate of Advanced Graduate Study (CAGS)

The Division offers a program leading to a Certificate of Advanced Graduate Study (CAGS) in Behavioral Sciences. This program is designed to meet the varied career needs of professionals who have earned an appropriate master's degree and who wish to attain greater competence in a combination of areas of study in the field of behavioral science. Areas of study offered include psychology, sociology, and anthropology. Ordinarily, the applicant's master's degree must be in an area within the field of behavioral science. Applicants must demonstrate that they possess an academic and experiential background relevant to their field, and must indicate that their needs and goals are in accord with the objectives of CAGS.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. Each student's CAGS program must include the Division's CAGS Seminar in Behavioral Sciences (BH 599) which is designed to provide a broad conceptualization of the field, as well as to focus the student's course of study on critical societal issues facing professionals in the field today. Students will also be expected to include in their program at least one additional seminar, chosen from the following: BH 560 Curricular Materials in the Behavioral Sciences, PY 515 Controversies in Social Psychology, SO 510 Urban Community Analysis, and AN 590 Community Cultures in Southeastern Massachusetts. Remaining credit requirements will be fulfilled by courses, selected under the direction of the advisor, which clearly meet the student's academic and career needs. Appropriate courses offered outside of the Division will be permitted on a limited basis.

Additional information regarding this program, including application procedures and general academic requirements, may be found in the Graduate School section of this catalogue.

DIVISIONAL COURSE OFFERINGS

BH 201 Quantitative Methods in the Behavioral Sciences 3 crs.

Prq.: 3 credits required - MA 105 or above (Acceptable by departments within the Division in lieu of MA 110).

The fundamentals of behavioral science research, with application of the scientific method to the particular problems and issues faced by psychologists, anthropologists, and sociologists. Includes hypothesis formulation, research design, data collection analysis and interpretation, and research report.

BH 501 Advanced Behavioral Sciences

6 crs.

Prq.: At least one course in each of the following fields: Anthropology, Psychology, and Sociology.

A broad range of materials concerning individual and group behavior, drawn from anthropology, psychology, and sociology, will be presented. Student progress will be evaluated by performance on examinations, oral and written reports, and participation in class discussions. The course will be team-taught by faculty from the Psychology and Sociology and Anthropology Departments.

BH 560 Curricular Materials in the Behavioral Sciences

3 crs.

New coursebooks and other materials planned by national advisory groups of anthropologists, psychologists, and sociologists and produced through long-term projects funded by the National Science Foundation will be presented, with emphasis on clear, objective behavioral scientific materials recommended for immediate use in secondary schools.

BH 599 CAGS Seminar in Behavioral Sciences

3 crs.

Designed to provide a broad conceptualization of the behavioral sciences, focusing on critical issues facing professionals in the field today.

Department of Psychology

Associate Professor Susan A. Todd, Chairperson
Professors: Drake Chisholm, Herbert Greenwald,
Louis Schippers, James Scroggs, Richard E. Stafford
Assistant Professors: Ruth Hannon, Margaret Johnson,
David Richards, Janet Stubbs

UNDERGRADUATE PROGRAM

Bachelor of Arts/Bachelor of Science

The objectives of the Department of Psychology are to 1) provide all students with an understanding of psychology and what psychologists do; 2) give students (where applicable) a background in psychology that will help them do their job better; 3) give our terminal majors sufficient training to enhance their opportunities for vocational placement in psychology related occupations; 4) give our majors who intend to become professional psychologists, sufficient preparation to permit them to be competitive in achieving admission and success in graduate schools.

Psychology Major

PY 100, PY 252, PY 224 or PY 226, PY 310, PY 360, and one course from the following: PY 318, PY 324, PY 340, or PY 353; plus a minimum of five additional courses in psychology: MA 110 or BH 201; BI 102 or BI 100 and BI 311, BI 112 or BI 272. A one-year sequence of foreign language study at the intermediate level, or its equivalent.

Psychology Minor

PY 100 or equivalent and five other psychology courses to fit the needs of the individual students.

Industrial-Personnel Psychology Concentration

This concentration will provide students with an understanding of the psychological principles related to personnel work and the application of these principles to business and industry.

PY 100, PY 210, PY 226 or PY 329, PY 252 or PY 355, PY 303 or PY 404, PY 305, PY 310, PY 313, PY 321, PY 360, plus one elective. PY 496 Personnel Practicum, may be taken with departmental permission.

BH 201, MA 110, EN 201, AC 240 or MA 190, SO 350 or SO 420, HI 325, plus one course from the following: AN 329, CC 452, or EC 200. Foreign language to the intermediate level, BI 102 or BI 100 and BI 112, BI 311 or BI 272.

Medical Psychology Concentration

This concentration will provide students with an understanding of the psychological principles which delineate and limit a medical model of human health care and the application of those principles, as they are theoretically presupposed derivatives of that model, to clinical medicine and human service areas.

PY 100, PY 227, PY 210, PY 252 or PY 355, PY 360, PY 370, PY 342, PY 353, PY 404, PY 365, PY 492, PY 495.

BI 102 or BI 100 and BI 112, BI 311 or BI 272, EN 201, BH 201, PO 277 or PO 385, CC 481 or CD 320, AN 330, SO 307, HE 102, foreign language to intermediate level.

GRADUATE PROGRAM

Master of Arts in Teaching

Appropriate courses in psychology may be taken, with faculty advisor approval, in the Division's Master of Arts in Teaching and CAGS programs. Detailed information regarding these programs, including a list of recommended courses, may be found under the Division of Behavioral Sciences, as well as in the Graduate School section of this catalogue.

Proposed Master of Arts

A joint program of Southeastern Massachusetts University and Bridgewater State College leading to the Master of Arts degree in Psychology is currently being planned. This degree has been approved by the College's Board of Trustees and the joint program, when completed, will be submitted for the final approval of the Board of Regents of Higher Education.

After the joint program has been approved - perhaps by the fall of 1982 - more complete information may be obtained from either Bridgewater State College or Southeastern Massachusetts University.

Bridgewater State College plans to offer the following two concentrations in the joint program:

Industrial-Personnel Psychology

Industrial-Personnel Psychology is designed for persons who wish to pursue an advanced degree in Psychology to prepare or further prepare for careers in organizations, industry, and government as personnel directors, career development officers, employment specialists, and other positions involving personnel management and administration.

Clinical Psychology

Clinical Psychology is a concentration designed to prepare or further prepare qualified students for positions as staff psychologists in both public and private mental health, social, and human service settings, and for related positions in business and industry where clinical knowledge and skills are needed.

COURSE OFFERINGS*

PY 100 Introductory Psychology

3 crs.

A survey of the different processes such as perception, sensation, learning, emotion, with a discussion of the underlying physiological processes as well as an introduction to the more complex areas such as personality development, psychopathology, social influences and testing. Methods of investigation and research will be integrated with the above topics.

PY 202 Quantitative Methods in Psychology

3 crs.

Prq.: PY 100, MA 110 or BH 201 or consent of the Instructor

The fundamentals of psychological research, with emphasis on quantitative methodology and the practical application of appropriate research techniques including: hypothesis testing, research reporting and experimental designs unique to psychology such as multivariate techniques, multiple regression, and factor analysis as well as psychological scaling.

PY 210 Applied Social Psychology

3 crs.

Prq.: PY 100

Effective communication and better understanding of oneself; listening, persuasion, conflict resolution, goals, expectations, and self-confidence. Contemporary problems such as dissent, minority problems. Guest speaker when possible.

PY 224 Child Psychology

3 crs.

Prq.: PY 100

An investigation of the growth and development of the child from conception to pre-adolescence will include both the influence of heredity and other biological factors as well as the social influences of child rearing practices, family value systems, and peer culture effects. Topics will include the development of verbal ability, conscience and moral judgment, personality and self concept. Current theories and research findings will be discussed in relation to the above topics.

PY 225 Psychology of Infancy and Early Childhood

3 crs.

Prq.: PY 100

An investigation of the growth and development of the child from the pre-natal period to the primary grades. Emphasis will be on motor skills as well as perceptual learning, cognitive behavior and socialization with applications to representative problems. *(May not count toward the first 33 hours in the psychology major.)*

PY 226 Adolescent Psychology

3 crs.

Prq.: PY 100

An investigation of the growth and development of the pre-adolescent and adolescent including both physical as well as psychological changes relating to intellectual, moral, emotional, personality, and social aspects. Current theories and research findings will be discussed in relation to the above topics.

PY 227 Development Through the Life Cycle

3 crs.

Prq.: PY 100

This course offers a survey of the life cycle and an integrated approach to understanding the individual and developmental processes. The developmental tasks of infancy, childhood, adolescence, adulthood are viewed from a life span perspective, with emphasis on continuity and change.

*See page 83 for general information regarding course offerings.

PY 240 Sensation and Perception

3 crs.

Prq.: PY 100

The auditory, visual, gustatory, olfactory, and cutaneous senses will be studied by presenting the basic data with their implications concerning functioning of these systems. The methods for collecting data and the theory concerning such phenomena as perception of movement, time, space, form, pattern, and attention will be presented.

PY 251 Human Learning and Memory

3 crs.

Prq: PY 100

Applied psychological aspects of motor, skill, and perceptual learning as well as human verbal learning and memory will be explored. Experimental research will be reviewed along with studies of practical application. *For non-psychology majors.*

PY 252 Psychology of Learning

3 crs.

Prq.: PY 100

The shaping of behavior, laboratory conditioning, reinforcement, approach and avoidance of a goal, discrimination and generalization of physical cues, animal learning experiments. Experimental approaches to the study of human behavior.

PY 280 Consumer Psychology

3 crs.

Prq.: PY 100

An investigation of the psychological techniques being used in advertising and merchandising. Emphasis will be on the psychological aspects of consumer purchasing practice with respect to motivation, attitudes, learning, and perception.

PY 303 Survey of Psychological Testing

3 crs.

Prq.: MA 110 of BH 201

An introduction to the theory of psychological measurement and test development including item indices, speededness, reliability, and validity with a survey of various psychological instruments used in assessment, personal selection, and psychological research.

PY 305 Psychology of Personnel Selection

3 crs.

Prq.: PY 100

The psychology of interviewing, testing and data analysis as it is employed for the effective placement of personnel in business, industry, and other organizations. Includes: criterion selection, job analysis, outcome prediction and validation, and a psychological perspective of jobs and job function.

PY 310 Social Psychology

3 crs.

Prq.: PY 100

The individual in social situations: attitude formation and change, culture and society, language and communication, leadership and group dynamics, personality characteristics and interpersonal relationships, small group behavior.

PY 313 Psychology of Organizations

3 crs.

Prq.: PY 100

Theories and research, organizational objectives, systems analyses and efficiency planning, quantity and quality of productivity, morale, leadership, personnel selection, career development, committee effectiveness, evaluation research and use of other feedback techniques to improve functioning. Term project: analysis of an existing organization, with recommendations.

PY 318 Experimental Social Psychology

3 crs.

Prq.: PY 310 and MA 110 or BH 201

Recent research including developments in methodology, theory, and research findings. Situational approaches and individual differences useful in testing theories and hypotheses in resolving conflicting findings of previous research. Research project required of the student.

PY 319 History of Psychology

3 crs.

Prq.: At least 12 hours of psychology or permission of instructor

A study of the early recognition and historical trends in the study of psychology from the early Greeks through the Renaissance to the 19th and early 20th century schools of thought. Eminent psychologists and their contributions will be integrated with the historical perspective.

PY 321 Psychology of Human Differences

3 crs.

Prq.: PY 100, BI 102 or equivalent

An introduction to the *ex post facto* method of research and its applications to the investigation of individuals and group differences in normal behavior. The relationship of aptitudes, personality, perception, values, etc., to age, birth order, gender, socio-economic class and race will be studied. Topics range from the origin, development and measurement of individual differences, to their applications in counselling, education, industry, and social work. Opportunity will be given for the student to learn about her or his individual differences.

PY 324 Experimental Child Psychology

3 crs.

Prq.: PY 224 and MA 110 or BH 201

Students will plan and conduct experiments related to childhood in some of the following areas: motor learning, perception, language acquisition, cognition, and personality development. Proper psychological experimental design will be emphasized.

PY 327 Psychology of Exceptional Children

3 crs.

Prq.: PY 224 or PY 226 or permission of the Instructor

This course will deal with the identification and understanding of children with special needs. Special techniques appropriate to helping these children will be treated. Emphasis will be placed on the psychological problems of the learning disabled, mentally, emotionally, and physically handicapped children as well as those of the academically gifted or creative child.

PY 328 Psychology of Mental Retardation

3 crs.

Prq.: PY 224 or consent of the Instructor

Origins (genetic, organic, sensory, maternal, and cultural deprivation), manifestations, diagnostic aids, therapeutic and remedial techniques.

PY 329 Psychology of Aging

3 crs.

Prq.: PY 100

A study of the sensory, cognitive and social changes resulting from old age including changes in learning, personality, and pathology. Problems of adjustment will be discussed and integrated with research findings in gerontology.

PY 339 Human Information Processing

3 crs.

Prq.: At least 12 hours in psychology or permission of the Instructor

The psychology of thinking including historical and philosophical issues; process models, information theory, cybernetic, general systems and field theory approaches, visual and auditory cognition, psycholinguistics, memory and attention, problem solving and concept formation, with implications for mental retardation and learning disabilities.

PY 340 Experimental Psychology: Sensation and Perception

3 crs.

Prq.: PY 100, PY 240, MA 110 or BH 201

Practical experience in laboratory approach to sensation and perception, including design, methodology, and technology. Emphasis is on evaluating and interpreting the practical and theoretical implications of experimental findings for our understanding of human perceptual and thought processes.

PY 342 Physiological Psychology

3 crs.

Prq.: BI 102 or equivalent and PY 100

A general survey of the neural bases of behavior and current issues of physiological psychology. Topics include: instinctive behavior, biopsychological investigation of learning and motivation.

PY 344 Drugs and Human Behavior

3 crs.

Prq.: PY 100

An exploration of psychoactive drugs and the way in which they are used in psychology today. Each drug will be studied in terms of the psychological, psychophysiological and behavioral theories of drug effects.

PY 350 Special Topics in Psychology

3 crs.

Prq.: At least nine hours in psychology or permission of the Instructor

Various and special topics of current interest in psychology will be offered from time to time. Topics will be announced before pre-registration. May be taken more than once but only three credits will be counted towards the first 33 hours in the Psychology major.

PY 353 Experimental Psychology: Learning and Motivation

3 crs.

Prq.: PY 100, PY 252, MA 110 or BH 201

Practical experience in laboratory approach to the study of behavior with considerable freedom for student to design his own experiments. Mainly oriented toward issues in learning and motivation: classical and operant conditioning, generalization and discrimination, extinction and transfer, goal-approach and avoidance, effect of drive on performance.

PY 355 Behavior Modification

3 crs.

Prq.: PY 100

Survey of theoretical positions with research, education, clinical and correctional application of a broad spectrum of behavioral principles to the treatment, modification, amelioration, and prevention of behavior and/or learning problems. Although the primary emphasis will be on tactical considerations, the ethical aspects of such techniques will be discussed.

PY 356 Learning Theory

3 crs.

Prq.: PY 251 or PY 252

A study of the conditions influencing classical conditioning, operant conditioning, stimulus control, memory, problem solving, and language acquisition. Each topic is to be viewed in terms of current theoretical perspectives.

PY 360 Psychology of Personality

3 crs.

Prq.: PY 100

Basic concepts in the field of personality, organized around such topics as motivation, personality structure and dynamics, personality development, assessment, and therapy. Problems and styles of adjustments will be considered.

PY 365 Medical Psychology

3 crs.

Prq.: Minimum of nine hours in Psychology

The application of psychological principles and concepts as they relate to psychological and behavioral problems and conditions related to illness, thus complementing and integrating existing biochemical knowledge of disease with psychological and behavioral techniques that will enhance understanding of health and illness.

PY 369 Psychology of Criminal Behavior

3 crs.

Prq.: PY 100

Definition of criminal behavior and the psychodynamics involved in its causality such as: child rearing practices, personality development, attitude formation, etc. The psychological aspects of punitive vs. rehabilitative incarceration, psychological intervention techniques including behavior modification, psychotherapy and psychodrama, will also be covered. An integration of theory with research findings will be maintained.

PY 370 Abnormal Psychology

3 crs.

Prq.: PY 100

A systematic study of behavior pathology. Symptom patterns, etiology, prognosis, and prevention. Understanding and care of mental illness.

PY 385 Environmental Psychology

3 crs.

Prq.: PY 100

Examines the interplay between the psychological aspects of man and his physical environment. Topics will include privacy, personal space, territorial behavior, crowding, urban living, as well as the interactions between the physical environment and a variety of social, cognitive, and perceptual behaviors.

PY 404 Attitude and Personality Measurement

3 crs.

Prq.: PY 360, PY 310, and MA 110 or BH 201

Principles of construction of attitude scales and personality assessment techniques, including both projective and inventory-type techniques. Issues and controversies in psychological measurement.

PY 415 Psychological Theory

3 crs.

Prq.: At least 12 hours in psychology

Fundamental assumptions underlying the psychological enterprise, and issues which are the subjects of continuing debate in the field - e.g. causality, determinism, methodological approaches, the control of behavior, conceptions of the nature of man.

PY 470 Clinical Psychology

3 crs.

Prq.: PY 360 and PY 370

Survey of diagnostic and treatment procedures and resources in clinical work with children and adults; professional skills and responsibilities of the clinical psychologist.

PY 474 Forensic Psychology

3 crs.

Prq.: PY 360, PY 370

A study of basic underlying assumptions of personality theory such as intentionality, nature/nurture and the knowability of man as these issues pertain to motive and bias as they manifest themselves in a judicial system.

PY 475 Psychology of Group Behavior

3 crs.

Group theory, theories of group psychotherapy, leadership and facilitation, group process; plus laboratory experience in interpersonal relations designed to develop skills useful in human services applications. Open only to senior psychology majors with consent of the department.

PY 490 Senior Seminar

3 crs.

Prq.: 18 hours in psychology or consent of the Instructor

Topical areas of psychology will be offered to allow seniors an opportunity to make individual presentations and critique each other through discussion. Topics will be announced in advance. May be taken twice but only three credits will be credited toward the first 30 hours for psychology majors.

PY 492 Seminar: Medical Psychology

3 crs.

Prq.: PY 365 and consent of Department

Examination of issues and problems in Medical Psychology.

PY 495 Practicum: Medical Psychology

3 crs.

Prq.: Consent of Department

Open to seniors in Medical Psychology Concentration, providing first-hand experience in the application of psychological and behavioral principles in the area of medical psychology.

PY 496 Personnel Practicum*

3 crs.

Prq.: Consent of Department

Direct application of psychological principles to actual personnel issues and problems in an organization such as business, industry, government, etc. Open only to seniors who wish to gain first hand experience.

*No more than six hours of any combination PY 496, PY 497, PY 498 or PY 499 may be counted towards the first 33 hours in the psychology requirements for a major.

PY 497 Research*

1-3 crs.

Prq.: Consent of Department

Individual or group research project. Primarily for senior majors in psychology; others by special arrangement. May be taken twice for maximum of six credits.

PY 498 Clinical Practicum*

3-15 crs.

Prq.: Consent of Department

Open to seniors who wish to have the opportunity to gain first hand experience in applying psychology in a clinical setting.

PY 499 Directed Study in Psychology*

1-3 crs.

Prq.: Consent of Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

PY 500 Advanced General Psychology

3 crs.

Prq.: Nine hours of psychology or permission of the Instructor

An integration of the basic areas of psychology such as sensation, perception, learning, motivation as well as areas of normal and abnormal personality, cognitive processes and social influences on the individual's behavior.

PY 502 Research

credit to be arranged

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this Catalogue.

PY 503 Directed Study

credit to be arranged

Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this Catalogue.

PY 506 Advanced Research Methods

3 crs.

Prq.: Either BH 201, PY 202, MA 110, GC 500 or equivalents

Advanced research methodology in the Behavioral Sciences including parametric and nonparametric experimental and ex post facto design, multivariate analyses, including factor analysis. Although some computational skill will be required, emphasis will be upon interpretation and critique of current research.

PY 508 Advanced Seminar

3 crs.

Prq.: Consent of Instructor

Various and special topics of current relevance in psychology to be dealt with in depth, will be offered from time to time. Topics will be announced before pre-registration. May be taken more than once but only three credits will be counted towards the graduate program.

PY 512 Attitude Change Research

3 crs.

Prq.: PY 310, MA 110 or BH 201 or equivalents; consent of Instructor

Empirical research in persuasion; communicator credibility, opinion difference, commitment, one-sided (pro) and two-sided (pro and con) arguments, coercion, threat, emotional and rational arguments. Theories of attitude change, including dissonance theory, balance theory, congruity theory, and assimilation and contrast theory.

*No more than six hours of any combination PY 496, PY 497, PY 498 or PY 499 may be counted towards the first 33 hours in the psychology requirements for a major.

PY 515 Controversies In Social Psychology

3 crs.

Prq.: PY 310 (Social Psychology) or its equivalent

In this seminar, students, working in teams, will present a summary of the research and theoretical literature related to a particular topic in social psychology. The presentation will include research evidence and theories supporting opposing viewpoints. Also included in the presentation will be students' own conclusions based on the weight of the evidence and a suggestion for a specific research study that could help clarify the problem.

PY 520 Theories of Development

3 crs.

Prq.: PY 224, PY 360 or equivalent; consent of Instructor

Contrast and compare the major models of development: cognitive-structural, psychoanalytic, and behaviorist, with special emphasis on their a priori assumptions and research strategies. Works of Piaget, Werner, Freud, Erikson, Skinner, Spence, and others will be examined.

PY 525 Cognitive Development

3 crs.

Prq.: PY 224 or equivalent; consent of Instructor

The development of the cognitive processes, including perception, language, intelligence, and memory. Throughout the life cycle the major focus will be on the growth of basic systems and strategies for representing information symbolically. The work of cognitive theorists such as Berlyne, Bruner, and Piaget will be considered.

PY 526 Childhood Psychopathology

3 crs.

Prq.: PY 224, PY 327 or equivalents

The nature, etiology, consequences and prevention of the major emotional disorders of children, considered from a developmental viewpoint. Areas include emotional problems of normal children as well as serious psychopathology. Primary emphasis is on psychological factors responsible for deviance. Some attention to organic and constitutional factors.

PY 528 Seminar in Clinical Child Psychology

3 crs.

Prq.: PY 224 and PY 327 or PY 526

Examination of the theoretical foundations and principle techniques used in the assessment and treatment of psychological problems of children. Emphasis will be placed on the unique needs of children in assessment and treatment.

PY 540 Cognitive-Perceptual Psychology

3 crs.

Prq.: PY 240, PY 252 or equivalent, or consent of Instructor

An in-depth examination and review of the scientific literature concerned with cognitive-perceptual issues, principles, and theories, integrating perception, learning, memory, language, and thinking. Materials will be evaluated with pragmatic regard to experimental, medical, clinical, and educational settings.

PY 570 Seminar in Psychotherapy

3 crs.

Prq.: PY 575, PY 576, PY 573, or equivalents

This course offers the advanced student an opportunity to further his or her understanding of the process of change in psychotherapy. At the CAGS level, it is assumed that the student will be engaged in therapeutic work at his or her professional work setting.

PY 572 Community Psychology and Mental Health

3 crs.

Prq.: PY 360 and PY 370

Examination of principles, literature, and practices of community mental health work and preventive psychiatry. Therapeutic methods in individual, couple, family and group work considered as well as the role of consultation and the community mental health center.

PY 573 Psychodiagnostics

3 crs.

Prq.: PY 575, PY 576 or equivalent

This course offers the advanced student the opportunity to examine the important appraisal stage of working with clients. Appraisal is extremely important before appropriate interventions can be determined.

PY 574 Family and Marital Therapy

3 crs.

Prq.: Consent of the Instructor

Students in the CAGS program work in local mental health or human services agencies, or school systems. Knowledge of the theory and practice of family therapy would be beneficial to their work in assessment, intervention, and case management.

PY 575 Neuroses and Personality Disorders

3 crs.

Prq.: PY 370 or equivalent

Students preparing for work in mental health settings need depth knowledge about this clientele with which they will work. This course goes beyond PY 370 Abnormal Psychology by focusing on one aspect of abnormality.

PY 576 The Psychoses

3 crs.

Prq.: PY 370 or equivalent

Students preparing for work in mental health settings need depth knowledge about this clientele with which they will work. This course goes beyond PY 370 Abnormal Psychology by focusing on one aspect of abnormality.

PY 590 Clinical Practicum

credit to be arranged

Prq.: Consent of the Department

While perhaps the majority of students entering a CAGS program will already be actively working in their respective career areas, there will be some students seeking to extend their knowledge and skills into clinical areas, as well as those who have not previously had active involvement in clinical work and will require it for jobs, promotions, etc. PY 590 is intending to offer such students suitable placements and supervision with respect to their particular needs.

Department of Social Work

Assistant Professor Dorothy Howard, Chairperson
Associate Professors: John Donelan, Betty Mandell
Assistant Professors: Geraldine Lake, Rebecca Leavitt

UNDERGRADUATE PROGRAM

Bachelor of Arts/Bachelor of Science

The objective of the social work major is to prepare undergraduate students for beginning professional positions in the field of social work and other human service fields. The program will also prepare students for professional training in social work at the graduate level.

Behavioral theory derived from courses in anthropology, psychology, and sociology undergird the instruction provided in the social work courses. The program includes a field experience in social agencies where students perform field-work assignments. A field work seminar is taken concurrently with the field experience.

Transfer students will be given credit for acceptable work completed at other institutions. However, it is expected that at least one-half the credit hours for the major will be completed at Bridgewater State College including the following courses: SW 300, SW 310, SW 311, SW 409, SW 410, SW 498, plus one of the following--SW 314, SW 324, or SW 325

Preparation for the senior year Field Experience, SW 498, is accomplished through a series of structured exercises attached to courses. SW 250, Introduction to Social Welfare, requires a 2-4 hour laboratory experience for a semester; SW 311, Social Work Methods, requires 8 hours a week volunteer experience for one semester. These experiences are designed to assist the faculty and the student in the selection of an appropriate senior field experience

The following criteria have been established as minimum prerequisites for admission and retention in the senior field experience course, SW 498:

1. Documentation that the student has achieved a grade of "C" or better in English Composition. If the student is required by college regulations to take English Composition II, a "C" or better must be achieved in the latter course;
2. Documentation that, by the first semester of the junior year, a student is maintaining a QPA of 2.2 or better;
3. Documentation that no more than one "Incomplete" grade will be carried into the senior year (that is, during the year-long field internship) unless satisfactory medical certification supporting the need for same provided. In no situation will a student be allowed to carry more than two such "Incomplete" grades into the senior year;
4. Agreement by a majority of the department that the student gives behavioral evidence of the maturity and mental stability necessary to satisfactorily perform the role of professional social worker.

Social Work Major

SO 202, SO 302, SO 400, SO 402, SW 250, SW 300, SW 310, SW 311, SW 314 or SW 324 or SW 325, SW 409, SW 410, SW 498, MA 110 or BH 201, PY 100, PY 360, PY 370.

An intermediate-level proficiency in a foreign language, ordinarily in Spanish or Portuguese is required.

GRADUATE PROGRAM

The Department of Social Work does not offer a program at the master's degree level. Social Work courses, with the exception of SW 250, may be taken for graduate credit in order to meet elective requirements in other graduate programs with faculty advisor's approval.

COURSE OFFERINGS*

SOCIAL WORK

None of these courses may be used to satisfy general education requirements.

SW 250 Introduction to Social Welfare

3 crs.

Prq.: SO 202 or AN 201 or PY 100

Analysis of the conceptions of social welfare. The historical development and function of social welfare and the value systems underlying the political, economic and social response to human needs. An overview of the roles of the social worker and the varied settings in which interventions are employed.

SW 300 Social Welfare Policy

3 crs.

Prq.: SW 250

This course follows the development of social welfare institutions and the societal response to human service needs. There is discussion of poverty and its effects on minority groups with special emphasis on Afro-Americans, Spanish-speaking, women and the aged.

SW 310 Human Behavior and Social Environment

3 crs.

Prq.: SW 250

An examination of the biological, psychological, and social development of the individual throughout his life span, and the relation of these factors to the individual's functioning in his environment. Special emphasis on the implications for social work practice.

SW 311 Social Work Practice: Theory and Method

3 crs.

Prq.: SW 250, 300, 310, or permission of the Instructor

A descriptive overview of the field of social work practice. The following topics will be approached from a generic standpoint: concepts and techniques in practice, with individuals, groups and communities, interviewing, roles of workers and clients, social process, problem solving and skill development. Emphasis on role-play as a learning aid. A semester-long volunteer experience in a social agency is a course requisite.

SW 314 Social Work Practice with Individuals and Families

3 crs.

Prq.: SW 311

The course will integrate knowledge of assessment skills and intervention approaches that will enable individuals and their families to better deal with various internal and social pressures in their life situations. A solid foundation for relationships building and interviewing skills will be provided.

SW 324 Social Work Practice with Groups

3 crs.

Prq.: SW 311

Basic concepts, principles, techniques, and approaches used in offering services to groups. A variety of agencies providing group service will also be examined. Role play will be employed as a learning aid.

*See page 83 for general information regarding course offerings.

SW 325 Social Work Practice in Community Organization

3 crs.

Prq.: SW 311

Presentation and discussion of concepts, principles, methods and techniques of providing human services and upgrading neighborhoods and communities.

SW 403 Social Services in the Health Care Field

3 crs.

Prq.: At least 6 hours at 300, 400 level Behavioral Sciences or Health. Open to declared majors in Behavioral Sciences or Health

The course will provide an historical overview of medical social work with emphasis upon the psychological and social aspect of medical care. A variety of health care settings will be analyzed in terms of social work role, treatment approaches, resource finding and interdisciplinary work. Students will be given an understanding of how both acute and chronic illness affect the patient, family and community with emphasis upon such variables as age, sex, ethnicity, and duration and nature of condition.

SW 409-410 Field Work Seminar I-II

3 crs. for each semester

Prq.: Social Work Majors only

In conjunction with a supervised field experience in a community agency, this seminar will provide an integration of social work theory garnered from previous courses with practice issues arising from the field internship. The diversity of social work settings and roles will be shared along with specified content and guest speakers from each area of practice.

SW 498 Field Experience In Social Work

3 crs. for each semester

Prq.: Social Work Majors only

Taken concurrently with SW 409 and SW 410, Field Work Seminar I-II, during the senior year, these practice aspects of the social work curriculum help students to learn to integrate social work theory and practice into a unified whole as a part of their development toward professional roles. The field experience provides opportunities for students to learn how to apply acquired knowledge and to develop skills in providing direct services to clients in a wide variety of community agencies, under the direction of a qualified agency field instructor. A total of 300 clock hours in the field is required to be fulfilled from September-May of the senior year.

SW 499 Directed Study in Social Work

1-3 crs.

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

Department of Sociology and Anthropology

Professor Abraham Thomas, Chairperson

Sociology Faculty

Professors: Morgan Brown, Clay Greene

Associate Professor William Levin

Assistant Professors Donald Armfield,
Howard London

Anthropology Faculty

Assistant Professors: Curtiss Hoffman, Reed Stewart, Richard Swiderski

UNDERGRADUATE PROGRAMS

ANTHROPOLOGY

Bachelor of Sciences/Bachelor of Arts

A Major in Anthropology provides students with an understanding of societies and cultures throughout the world. Specifically: 1) A major prepares students for teaching careers in either elementary or secondary schools and/or college teaching or research. 2) It prepares students for careers in industry. 3) It offers a general background to students who are interested in jobs with state or federal agencies. 4) It provides a background for students to become educated, well informed adults. Majors are encouraged to continue study for advanced degrees (M.A. or Ph.D.) because those individuals are more likely to be selected for positions in the field.

A concentration in public archeology is designed to provide the basic knowledge and training necessary for careers in contract archeology and cultural resource management. The program introduces students to the history of the development of public archeology and to the study of federal, state and local legislation protecting archeological resources. The concentration relies heavily on cognate courses in geology and geography.

Anthropology Major

a) Cultural Anthropology Concentration

Requirements: AN 201, AN 202, AN 321, AN 323 and six other courses in Anthropology

Cognate requirements: BH 201 or MA 110

A one-year sequence of foreign language study at the intermediate level, or its equivalent.

b) Public Archeology Concentration

Requirements: AN 201, AN 202, AN 302, AN 306, AN 328, AN 410, AN 323 or AN 333, nine credits of field work (AN 303 plus AN 305 or AN 332 or three credits of Directed Study in the field) and one other course.

Cognate requirements: ES 100, ES 101; MA 110 or BH 201; and three courses from ES 102, ES 194, ES 284, ES 462, ES 466, ES 476, GE 216, GE 217, or BI 313.

A one-year sequence of foreign language study at the intermediate level, or its equivalent.

Anthropology Minor

18 credits in Anthropology as recommended by the Department.

SOCIOLOGY

Bachelor of Arts/Bachelor of Science

Human beings interact in several ways with other human beings and construct patterns of relationships, groups, classes, institutions, and societies. We are individuals but necessarily participate in and are shaped by the large number of relationships that constitute social reality. The sociological perspective focuses on these social relationships.

The objective in all courses is to provide the student with an understanding of how these social relationships arise, why they persist, what effects they have, how they maintain social order or contribute to social change. This understanding is provided by means of classroom learning of the theories and methods of research used by the practitioners of sociology and by internship practices in the field, where the student is expected to apply or deepen classroom learning. This objective is designed with the hope that it will facilitate the student's entrance into the labor market or graduate school.

Sociology Major

SO 202, SO 400, SO 402 plus a minimum of seven other courses in Sociology.
MA 110 or BH 201.

Sociology Minor

18 credits in Sociology as recommended by the Department.

Criminology Concentration

The Sociology Major with a Concentration in Criminology is designed for students who are considering possible careers in the diverse area of the administration of justice. The program introduces and sensitizes students to the multifarious dimensions and explanations of crime and delinquency, as well as provide analyses of structural sources associated with the legislative process involved in the formulation of the criminal law.

Requirements: SO 202, SO 304, SO 327, SO 328, SO 354, SO 355, SO 356, SO 384, SO 400, SO 402

A field work placement assignment of 3-15 hours is strongly recommended.

Cognate requirements: HE 305, PY 369.

GRADUATE PROGRAM

Master of Arts In Teaching

Appropriate courses in anthropology and sociology may be taken, with faculty advisor approval, in the Division's Master of Arts in Teaching and CAGS programs. Detailed information regarding these graduate programs, including a list of recommended courses may be found under the Division of Behavioral Sciences, as well as in the Graduate School section of this catalogue.

Proposed Master of Arts

A joint program of Southeastern Massachusetts University and Bridgewater State College leading to the Master of Arts degree in Sociology is currently being planned. This degree has been approved by the College's Board of Trustees and the joint program, when completed, will be submitted for the final approval of the Board of Regents of Higher Education.

The joint program is designed for individuals who wish to prepare for careers involving planning and policy positions in business and industry, human service positions, research, teaching and local, state, and federal agencies.

After the joint program has been approved - perhaps in the fall of 1982 - more complete information about the joint program may be obtained either from Bridgewater State College or Southeastern Massachusetts University.

COURSE OFFERINGS*

ANTHROPOLOGY

Any 200 level Anthropology course may be used to satisfy General Education Requirements.

AN 201 Introduction to Physical Anthropology **3 crs.**

Divisions of anthropology. Primate evolution and behavior. Origins and physical and cultural development. Concepts of racial variation.

AN 202 Introduction to Cultural Anthropology **3 crs.**

Human cultural variability. Human societies of the past and present around the world. The problem of ethnocentricity. Basic concepts and methods of analyzing cultures.

AN 207 Anthropology of Religion **3 crs.**

The origins and development of religion in society; myth, ritual, magic, and religious specialists. Australian, African, and American Indian.

AN 210 Introduction to Folklore **3 crs.**

The meaning and subdivisions of folklore, myth, folktale, proverb, riddles. Analyses of story elements and major folklore areas.

AN 211 Myth and Culture **3 crs.**

The cross-cultural approach to world mythology. Myths of our own and other cultures will be analyzed using the methods of Levi-Strauss and Jung. Myth will emerge as a fundamental human function, necessary for the well-being of both cultures and individuals.

AN 302 Introduction to Archeology **3 crs.**

Examination of field methods, systems of data recording, analytical methods, and their conceptual basis. Abstract theory closely integrated with specific case material. Laboratory exercises in application of artifact analysis. (Offered in summer only)

**AN 303 Archeological Field Excavation in
in Prehistoric Sites in New England** **6 crs.**

Prq.: Consent of the Instructor

Intensive training in excavation techniques, field recording, and primary cataloguing and analysis of archeological materials. (Offered in summer only)

AN 304 Personality and Culture **3 crs.**

A study of the interrelationships between individual and society, focusing on major theories about the formulation of personality by the surrounding structures, including: a cross-cultural study of childhood; adolescence in changing American personality as compared with personality structures in traditional society.

AN 306 Native Cultures of North America **3 crs.**

A cross-cultural study of the tribal cultures of the United States, Canada, and Mexico. Emphasis will be placed on the understanding of Native American cultural systems and on the current state of Native American interaction with governmental policies and attitudes.

*See page 83 for general information regarding course offerings.

AN 307 Urban Anthropology

3 crs.

The study of urban culture using anthropological fieldwork methods.

AN 309 Anthropology of Art

3 crs.

This course will consider particular art forms in their cultural contexts. It will begin with forms considered conventional by Western standards - painting and sculpture - and examine them in prehistory and in non-Western contexts. Then the artistic properties of crafts and other types of production not usually accepted as art will be studied: masks, pottery, tools, house plans, arrangements of objects, ritual, the role and philosophy as well as the mystic, of the artist will be contrasted in a number of contexts. The imposition of Western art ideology on native cultures, the creation of syncretic and tourist art will be used to epitomize the ongoing interests of anthropology of art.

AN 310 Peoples and Cultures of Africa

3 crs.

A survey of the multiplicity of ways in which contemporary societies, rural and urban, arrange their ways of life in a rapidly changing Africa.

AN 311 The Emergence of Cities

3 crs.

A study of the development of urban centers out of a Neolithic subsistence base, both in the nuclear Near East and in the New World. This course will focus on the problems of urban life in antiquity, with special reference to those problems which may be found in modern cities. Attempted solutions will be evaluated with an eye to their applicability in modern situations.

AN 321 Comparative Social Structures

3 crs.

A comparison of social structures of selected non-Western societies. Stress is placed upon the meaning of society, structure, and analytical methods of comparison.

AN 323 Anthropological Theory

3 crs.

Prq.: AN 202, AN 207, or AN 210

A survey of the early schools of cultural theory including Adolf Bastian, Lewis Morgan, Edward B. Tylor, the British Diffusionists, The German Historical-Diffusionist School, French Sociology, Functionalism, including Franz Boas to Levi-Strauss. Current theory.

AN 328 Archeology of North America

3 crs.

The development of prehistoric and proto-historic Native American cultures. Cultural dynamics of hunting-gathering and maize agriculture. Theories of the peopling of the continent will be evaluated.

AN 330 Medical Anthropology

3 crs.

The course concentrates on health, illness, and healing in cross-cultural perspective. It will examine ways in which culture mediates ideas of physical well-being, and will be aimed at dispelling belief in the absolute truth of medical dogma, teaching students to think outside their own cultural biases. It begins with a consideration of body image in a range of different cultures and then proceeds to the varying rationales for normal function and for dysfunction. The healing process as ritual and as scientific procedure, including the theory and practice of healing in different cultures, figures into the course, as does the training and outlook of healers--doctors, priests, shamans, nurses, midwives, and others. Finally, the medical systems of several cultures, ancient and modern, industrialized and pre-industrial are compared.

AN 332 Practicum In Field Archeology

3 crs.

Prq.: AN 302 (to be taken concurrently), AN 303, or consent of the Instructor

Experiential training in the practical skills of field archeology. Direction in site survey, excavation tactics and strategy, fieldwork supervision, methods of sampling and on-site analysis. Introduction to laboratory work: cataloguing, recognizing lithic materials, metric measurement, and flotation of organic samples.

AN 333 Archeological Theory

3 crs.

Prq.: AN 302

A seminar course dealing with theories of archeology from the late 19th century to the present, including the ideas of Petrie, Childe, Wheeler, Taylor, Braidwood, Rouse, Binford, Flannery, Redman, and Trigger. The course will address opportunities and problems arising from the introduction of the "New Archeology" in the early 1960's and will attempt to reconcile these new ideas with their predecessors.

AN 350 Special Topics in Anthropology

3 crs.

Prq.: Three hours in anthropology and permission of the Instructor

Various and special topics of current interest in anthropology will be offered from time to time. Topics will be announced before pre-registration. May be taken more than once but only three credits will be counted towards the first 30 hours of the major.

AN 410 Public Archeology

3 crs.

Prq.: AN 302

An introduction to the field of Public Archeology, its history of development. Emphasis will be placed on the basic knowledge and training necessary for careers in contract archeology and cultural resource management: 1) to introduce students to the history of the development of public archeology; 2) to study the federal, state, and local legislation protecting archeological resources; 3) to provide administrative training for doing contract archeology - contract and research proposal development, report writing, Environmental Impact Statement interpretation - and to provide a basic background for cultural resource management careers.

AN 498 Field Experience In Anthropology

3-15 crs.

Prq.: Consent of the Instructor

The field experience provides an opportunity for students to apply methods of fieldwork in ongoing societies; to design field studies; to learn methods for collection and analysis of empirical data; and to participate in experimental field projects.

AN 499 Directed Study in Anthropology

1-3 crs.

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

AN 502 Research

credit to be arranged

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this Catalogue.

AN 503 Directed Study

credit to be arranged

Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this Catalogue.

AN 510 Symbolic Anthropology

3 crs.

Prq.: AN 202 or any introduction to cultural anthropology

The course considers symbols in the context of anthropological theories of culture, and is divided into two sections: on the nature of symbols and on the symbolic analysis of cultural institutions. The origin of symbols, their universality and variability are taken up in the first section while their role in ritual, language, social organization and other cultural systems is studied in the second section.

AN 520 Ethnographic Film

3 crs.

The course compares written ethnography with the increasingly important medium of film ethnography and identifies the unique features of film as a means of communicating conclusions

about culture. Emphasis is on the attributes of ethnography on film: viewpoint, editing, time sequence, setting, documentation. Students will read ethnographies and view selected films presenting the same cultures.

AN 525 Problems of New England Archeology 3 crs.

Prq.: AN 302, AN 303, AN 328, or equivalent

An intensive seminar course in local prehistory, exploring the cultural and environmental evidence for settlement and subsistence patterns in the Northeast. Important considerations will include how we know what we know, and why we currently do not know more about the prehistoric inhabitants of this area. Individual research papers will be assigned.

AN 526 Cultural Resource Management 3 crs.

Prq.: AN 302, AN 303, AN 333, AN 411 or equivalents

For graduate students seeking employment in the field of conservation archeology. A detailed survey of the techniques and importance of cultural resource management, including archival research, field strategies, conservation of finds, report writing, and archeological legislation. Individual research papers will be assigned.

AN 590 Seminar: Community Cultures in Southeastern Massachusetts 3 crs.

Examination of cultural traditions, changing beliefs and institutions, current folklore, and oral traditions in relation to specific ethnic, political, and economic groupings in southeastern Massachusetts.

SOCIOLOGY

SO 202 Introduction to Sociology 3 crs.

Social structure, basic human institutions, analysis of social processes, major social forces.

SO 302 Social Problems 3 crs.

Contemporary social problems which are reflected in the behavior of individuals, but whose origins and causes lie outside of individuals. Topics treated will include drug abuse, crime, juvenile delinquency, divorce and other family problems, mental illness and other health problems, social class, and selected social issues.

SO 303 The Family 3 crs.

The family as a social institution in terms of its historical and cultural development. Analysis of psychological and social factors in contemporary family life.

SO 304 Social Stratification: Class, Status and Power in America 3 crs.

Historical and contemporary examples of the range of stratification systems. Problems of class and caste conflicts. Trends in class system and social mobility, with special attention given to similarities and differences of modern industrial societies.

SO 305 Sociology of Education 3 crs.

Educative factors in the social process. Some attention will be given to preliterate cultures and the functioning of the dominant institutions. Major emphasis on the relation of stratification to education, and of education to horizontal and vertical mobility. Social class and ethnic backgrounds will be examined for their relationship to the functioning of schools. Recent well-known empirical findings will be discussed.

SO 306 Urban Sociology 3 crs.

Prq.: SO 202

A sociological and ecological analysis of the city in terms of urban institutional and personality patterns, folkways and mores. Ecological processes and structures. The city as a center of dominance over a trade area and hinterland.

SO 307 Sociology of Health and Medicine

3 crs.

Prq.: SO 202, or permission of the Instructor

Distributional analysis of health, disease, and health care delivery systems. Systems analysis of different types of health care social structures. Socialization analysis of medical personnel. Institutional analysis of relationships between medical, economic, religious, governmental, mass media, family, and educational organizations in modern societies. Cross-cultural analysis of health care delivery systems. Interaction analysis of doctor-patient and other service worker-client relationships and their effects on the delivery of health care. Network analysis of informal physician and client relationships affecting prevention and treatment of disease. In addition, students will gain research skills in epidemiology and community health needs assessments and evaluations of programs in health care.

SO 308 Sociology of Religion

3 crs.

Comparative study of religious systems and institutions; function and role of religion and the church in society; professional status, history and relations of the clergy.

SO 310 Society and Culture in Modern India

3 crs.

A descriptive and analytical examination of societies of the Indian subcontinent dealing with their cultural histories, economic, social, political and religious institutions. Problems of cultural and social change. *Course may be used to satisfy requirements for Anthropology majors and minors.*

SO 312 Sociology of Prejudice and Discrimination

3 crs.

A study of the relationship between majority and minority groups in America, with attention to the domination of categories of people on the basis of their race, sex, age, ethnicity, and/or religion. Theories and data will be presented concerning the development, maintenance and operation of discrimination and prejudice, and the relationship between them.

SO 319 Population and Society

3 crs.

The mutual influence of demographic factors and social structure. Trends in population growth and their relationship to industrialization, urbanization and economic development. Current trends in population growth and their implications for developing nations as well as for developed nations. Relationship between population and environmental problems. Methods and problems of population control.

SO 320 The Sociology of the Third World

3 crs.

Prq.: SO 202 or AN 202 or permission of the Instructor

An introduction to the sociological aspects of development in the developing countries of Asia, Africa, and Latin America. Relationship of industrialization, urbanization, education, the "Green Revolution", population growth, class structure, political structure, etc., to development. The role of the West in the development process of the Third World countries, historically and at present. Special attention given to structural change and interpersonal dependency.

SO 321 Religion and Society in Asia

3 crs.

The interrelationship between religion and social change will be discussed with particular reference to selected countries in Asia, including Japan, India, and Ceylon. The major characteristics of Islam, Hinduism, and Buddhism will be studied in relation to their effect on society.

SO 325 Sociology of Small Groups

3 crs.

Prq.: SO 202

Descriptions and explanations of small groups' structures and processes. Analysis of social networks, decision-making processes, power, and influence within small groups. Explanation of behaviors by reference to small group values and norms.

SO 326 Social Gerontology - Sociology of Aging

3 crs.

Prq.: SO 202

This course will focus on aging in America as a social problem. Topics covered will include reasons for the view of aging as a problem. The impact of aging on individuals and society, sociological theories of aging, and proposed ways of alleviating or eliminating aging as a problem.

SO 327 Deviance and Social Control

3 crs.

Prq.: SO 202, or permission of the Instructor

This course examines deviant acts with an eye toward understanding social order and change. Topics covered include the types and causes of deviance, the social conditions and elements of deviant acts, and the effects of deviance and mechanisms for prevention, punishing, and rehabilitating deviant individuals and groups.

SO 328 Criminology

3 crs.

Prq.: SO 202, or permission of the Instructor

This course will be concerned with theories of crime causation, and perspectives on administration, treatment, prevention, and prediction. Consideration will be given to the influence of social class and other factors in criminal behavior.

SO 329 Public Opinion and Mass Media

3 crs.

Prq.: SO 202, or permission of the Instructor

Principles of mass communication and public opinion will be discussed from the point of view of the source of a message, the message itself, the audience, the channel through which the message proceeds and the effect of the message.

SO 330 Woman's Roles: Sociology of Sex and Gender

3 crs.

An analytical study of the relation of sex to power and influence in society. Differentiation in sex roles as affected by the economy and reinforced by other institutions. New alternatives for women.

SO 332 Complex Organizations

3 crs.

Prq.: SO 202, or permission of the Instructor

This course will deal with the emergence, structure, function, and social significance of complex organizations. Emphasis will be placed upon the results of research in hospitals, schools, prisons, and military and industrial organizations. Some attention will be given to informal associations and organizational change. Reciprocal role changes for men.

SO 334 White Collar Crime

3 crs.

Prq.: SO 202

Broadening the definition of crime, this course will study the behavioral systems involved in the commission of white collar crimes in complex structures, such as government bureaucracies, multi-national corporations, and underground systems. The modern institutional factors--political and social--permitting or restricting the commission of such crimes will be investigated. Specifically, the performance of the criminal justice system will be examined.

SO 335 Social Change

3 crs.

Prq.: SO 202, or permission of the Instructor

Sources, patterns, spheres, levels, processes, policies of social change. Classical, neo-classical, modern theories in the field. The course emphasizes the above as related to contemporary societies.

SO 340 Sociology of Politics

3 crs.

Prq.: SO 202 or consent of the Instructor

A study of the state, political practices, power, and theories in the field. The emphasis is on the sociological conditions under which the above phenomena evolve.

SO 350 Sociology of Work

3 crs.

Prq.: SO 202

An analysis of the occupational system as affected by the "non-economic" institutional factors. Changes in the occupational structure and the class structure; employers and trade unions; managers and workers; work situation and the life situation; professionalization and "white collar unionism".

SO 354 Sociology of Corrections

3 crs.

Prq.: SO 328

Analysis of the social structures and processes involved in dealing with individuals who have been designated as offenders of criminal law. Probation, prison, parole, programs of prevention and rehabilitation.

SO 355 Juvenile Delinquency

3 crs.

Prq.: SO 202

Analysis of the nature and types of juvenile behavior that violates law; the mechanisms of defining such behavior as delinquent; and the relationship between delinquency and the social situations of juvenile offenders.

SO 384 Criminal and Delinquent Behavioral Systems

3 crs.

Prq.: SO 328

A study of behavioral systems in the commission of crime and delinquency. Such systems include institutional as well as more informal social structures and patterns of behaviors, including the normative rationalizations that support and legitimize criminal and delinquent behaviors in society.

SO 399 Special Topics in Sociology

3 crs.

Prq.: SO 202

Various special topics of current interest in sociology will be offered from time to time. Topics will be announced before registration. May be taken more than once but only three (3) credits will be counted toward the first 30 hours in the sociology major.

SO 400 Seminar: Social Theory

3 crs.

Prq.: SO 202 or permission of the Instructor

The history of social theory and selected topics in modern social theories, analysis of alternative conceptual approaches and their methodological requirements. For majors in sociology or behavioral sciences.

SO 401 Contemporary Sociological Theory

3 crs.

Prq.: SO 400, or permission of the Instructor

An examination of post Weberian sociological theories, including treatment of significant theoretical issues currently encountered in the discipline.

SO 402 Seminar: Research Methods In Sociology

3 crs.

Prq.: SO 202 or permission of the Instructor

Application of scientific methods to the analysis of social phenomena, methodological orientation in sociology, types of research procedure, nature of sociological variables. For majors in sociology or behavioral sciences.

SO 497 Research*

3 crs.

Prq.: SO 402

Primarily for Senior Sociology Majors; others by special arrangement. Students will conduct social research, using techniques taught in SO 402, writing reports of findings as for publication. Experimental survey and content analysis approaches will be used.

*No more than six hours of any combination of SO 497, SO 498 or SO 499 may be counted toward the first 30 hours of the sociology requirements for a major.

SO 498 Field Experience in Sociology*

3-15 crs.

Prq.: Consent of Department

The field experience provides an academic experience in which the student contributes to the ongoing organizational process while learning to apply sociological theories to observations of structure, function and process in a particular institution.

SO 499 Directed Study in Sociology*

1-3 crs.

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

SO 501 Graduate Seminar in Sociological Theory

3 crs.

Prq.: A minimum of three sociology courses acceptable to the department or consent of the Instructor

Designed to foster skills in theory construction and in analyzing several major sociological paradigms and schools of thought, including structural-functionalism, conflict theory, and symbolic interaction. Readings from classical and modern sociologists such as Durkheim, Marx, Spencer, Parsons, and Homans will be examined.

SO 502 Research

credit to be arranged

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this Catalogue.

SO 503 Directed Study

credit to be arranged

Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this Catalogue.

SO 504 Graduate Seminar in Sociological Research Methodology 3 crs.

Prq.: A minimum of three courses acceptable to the Department or consent of the Instructor
Detailed discussion and use of techniques for the empirical study of social order including exploratory, descriptive, and causal research; observation (structured and unstructured), interviews and questionnaires; survey research and experimental design, content analysis, sampling, problems in measurement techniques and data analysis.

SO 506 Theories of Race and Ethnic Relations

3 crs.

Prq.: A minimum of three sociology courses acceptable to the Department or consent of the Instructor

Focus on the use of racial and ethnic characteristics in the operation of inequality in society. Beginning with the general principles of intergroup relations (majority and minority concepts) material will be introduced to apply these ideas to specific experiences of racial and ethnic groups, especially Black Americans.

SO 508 Social Stratification in Comparative Perspectives

3 crs.

Prq.: A minimum of three sociology courses acceptable to the Department or consent of the Instructor

Theories of inequality between groups in historical perspective, from classical to modern industrial times. Discussion and evaluation of sociological research in social stratification in regard to different social and cultural groups.

*No more than six hours of any combination of SO 497, SO 498 or SO 499 may be counted toward the first 30 hours of the sociology requirements for a major.

SO 510 Urban Community Analysis

3 crs.

Prq.: A minimum of three sociology courses acceptable to the department or consent of the Instructor

The changing structure and dynamics of urban social organization in the context of modernization and urbanization. Emphasis upon cities and metropolitan areas in America.

SO 514 Theories of Social Deviance

3 crs.

Prq.: A minimum of three sociology courses acceptable to the Department or consent of the Instructor

Descriptions and explanations of a variety of deviant behavior, beliefs, and attributes, including mental and physical deviance, deviant sexual practices, and religious cult movements. Reading, writing, and observation will be conducted in order to understand the social forces that contribute to the creation, maintenance, and change of deviant relationships involved in vice, sin, disloyalty, and crime.

SO 516 Sociology of Sex and Gender

3 crs.

Prq.: A minimum of three sociology courses acceptable to the Department or consent of the Instructor

Ramifications of ascribed statuses "male" and "female" in contemporary and noncontemporary societies. Origins and effects of gender roles. Examination of myths explaining gender roles. Projections for the future.

SO 518 Sociology of Aging

3 crs.

Prq.: A minimum of three sociology courses acceptable to the department or consent of the Instructor

Sociological forces in the aging process and among the aged. Examination of the impact of physiological and psychological forces on the process. The major social institutions and their interactions with aging. Policy implications for the future.

SO 520 Sociological Analysis of Small Groups

3 crs.

Prq.: Consent of Instructor

Description and analysis of the formation, structure, and nature of relationships observed in small and informal groups, including work groups, families, peer groups, cliques, religious sects, communes, and aristocracies.

SO 528 Seminar: Sociology of Education

3 crs.

Prq.: A minimum of three sociology courses acceptable to the department or consent of the Instructor

Sociological theories and research relevant to issues in education. Investigation of selected problems from a sociological perspective: socialization, selection and social stratification patterns; bureaucracy, professionalization, and authority relations in schools; prospect of social change resulting from school reform.

SO 530 Seminar in Society, Culture, and Personality

3 crs.

Prq.: A minimum of three sociology courses acceptable to the department or consent of the Instructor

Analysis of a variety of structures and processes that influence individuals and that relate them to their social milieus and cultural products. Attention will also be paid to the manner in which individuals both interact with and change social structures and cultural environments, such as technology, institutions, and ideologies.

SO 580 Special Topics In Social Research Techniques

3 crs.

Prq.: A minimum of three sociology courses acceptable to the Department or consent of the Instructor

Designed to take advantage of the 1) availability of faculty with special expertise in certain issues and techniques of sociological research; 2) specific methodological interests and needs expressed by students; and 3) significant developments in the field of sociology and in society.

One or more from a number of methods or methodological issues may be studied, including, but not restricted to the following: survey research, measurement, research design, data analysis, evaluation research, needs assessment, and ethnomethodology.

SO 585 Special Topics in Sociological Theory

3 crs.

Prq.: A minimum of three sociology courses acceptable to the department or consent of the Instructor

Designed to take advantage of the 1) availability of faculty with special expertise in certain issues and approaches in sociological theory; 2) specific theoretical interests and needs expressed by students, and 3) significant developments in the field of sociology and in society. One or more from a number of theoretical issues may be examined consistent with the foregoing.

Division of Humanities and Creative Arts Art, English, Foreign Languages, Music, Philosophy and Religious Studies, Speech Communication, Theatre Arts, and Communication Disorders

Division Head: Professor Robert J. Barnett

UNDERGRADUATE PROGRAMS

The Division of Humanities and Creative Arts, consisting of the departments of Art, English, Foreign Languages, Music, Philosophy & Religious Studies, and Speech Communication, Theatre Arts, and Communication Disorders, provides instruction and training in several areas of creative and humanistic endeavors. Through its faculties the Division offers undergraduate majors in Art, Communication Arts and Sciences, English, French, Philosophy, and Spanish. Minors in the areas listed above as well as German, Italian, Music, Portuguese, Russian, and

Religious Studies are offered to the undergraduate. Each of the departments in the Division offers a balanced program for the student with ample opportunity to study theory in the classroom and to put that knowledge into practice through internships and other practical experiences.

GRADUATE PROGRAMS

In addition to the Bachelor of Arts degree, the Division of Humanities and Creative Arts offers programs leading to the degree of Master of Arts (in the areas of English, Humanities, and Speech Communication) and the degree of Master of Arts in Teaching (in the areas of Creative Arts, Speech Communication and Theatre Arts, English, Foreign Languages, and Humanities), as well as a Certificate of Advanced Graduate Study (CAGS) in Creative Arts. Further information about these programs may be found below, in the case of interdisciplinary programs, and in the departmental presentations which follow, as well as in the Graduate School section of this catalogue.

Master of Arts in Humanities

The Division offers a program leading to the degree of Master of Arts in Humanities, which is designed to prepare qualified students for research, further graduate study, and teaching. An undergraduate major in one of the disciplines within the scope of the humanities is normally required for admission to this program. An interview is required; students should contact the Head of the Division. All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue.

Master of Arts in Teaching (Concentrations in Humanities and Creative Arts)

The Division offers programs leading to the degree of Master of Arts in Teaching with concentrations in Humanities and Creative Arts. These programs are designed primarily to meet the varied needs of graduate students who are currently teaching or intend to teach at the secondary level. Applicants to the Creative Arts concentration should specify their primary area of interest.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. Degree requirements include a minimum of 12 appropriate

graduate credits in designated areas of professional study (consult M.A.T. degree requirements in the Graduate School section of this catalogue), and a minimum of 18 appropriate graduate credits in the area of concentration (approved by the program advisor on the basis of the background, interests, and needs of the student).

Certificate of Advanced Graduate Study (CAGS) In Creative Arts

The Division offers a program leading to a Certificate of Advanced Graduate Study (CAGS) in Creative Arts. This program is designed to meet the varied career needs of professionals who have earned an appropriate master's degree and who wish to attain greater competence in a combination of areas of study in the field of creative arts. Areas of study offered include art, music, speech communication and theatre arts. Ordinarily, the applicant's master's degree must be in an area within the field of creative arts. Applicants must demonstrate that they possess background relevant to their field, and must indicate that their needs and goals are in accord with the objectives of the CAGS.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of the catalogue. Each student's CAGS program must include the Division's CAGS Seminar in Creative Arts (CA 599), which is designed to provide a broad conceptualization of the field, as well as to focus the student's course of study on critical issues facing professionals in the field today. Remaining credit requirements will be fulfilled by courses which clearly meet the student's academic and career needs selected under the direction of the advisor.

Additional information regarding this program, including application procedures and general academic requirements, may be found in the Graduate School section of this catalogue.

DIVISIONAL COURSE OFFERINGS:

HU 311 Dante and Medieval Culture in Translation 3 crs.

Life and culture of the Middle Ages approached through a close investigation of Dante's Divine Comedy.

HU 330 English as a Second Language 3 crs.

Theoretical, historical and practical considerations of the teaching of English as a second language.

CA 599 CAGS Seminar in the Creative Arts 3 crs.

Designed to provide a broad conceptualization of the creative arts, focusing on critical issues facing professionals in the field.

Department of Art

Professor Stephen Smalley, Chairperson
Professor John Heller
Associate Professors John Droege, Joan Hausrath
Assistant Professors: Roger Dunn, William Kendall
Larry Pollans, Dorothy Pulsifer

UNDERGRADUATE PROGRAMS

Bachelor of Arts

The Department of Art offers students a choice of two major areas of study and career preparation in the visual arts. For both areas, care has been taken in developing the study of art so that a basic yet versatile and resourceful foundation in the arts is assured.

The major in art is designed to meet the needs of those students whose career ambitions include training for commercial art fields, industrial and product design, community art programs or graduate study in the arts, as well as those who seek teaching in the public schools as a career.

Students interested in teaching must select High School Education as a minor. Prospective teachers of art are encouraged to join the Student Chapter of the National Art Education Association.

Art majors not interested in an education minor are urged to select a minor complementing their major.

Department of Art

The diversity of course offerings within the Art Department provides an excellent opportunity for students electing an art minor to enlarge upon their cultural foundation. Through a cultivation of aesthetic sensibilities, it is hoped that the entire college experience will be enriched.

To help insure an appropriate selection of art courses in the major or minor, it is important that each student work closely with his or her art advisor or the department chairperson in program selection. This is particularly important within an instructional program that seeks to develop and refine art skills as well as enlarging upon one's creative dimensions.

Students should be aware that typically there will be expenses in studio courses for materials beyond the required educational services fees.

A comprehensive gallery calendar is maintained throughout the academic year as well as a continuing exhibition of the permanent art collection of the College.

Art Major

AR 120, AR 201, AR 202, AR 220, AR 230, AR 240, AR 250, AR 271. The remaining three or four art courses are to be selected in conjunction with the major advisor.

Art Minor

AR 120, AR 220, the remaining twelve credits are selected in conjunction with an art advisor.

Art Education

The requirements for teacher certification in Massachusetts have changed. This in turn is necessitating corresponding changes in requirements for programs which include certification. Students graduating after August 1981 should consult with the department chairperson concerning changes in program requirements. Programs leading to initial certification will include a full semester of student teaching. Graduate programs leading to an additional certificate will require the equivalent of a half-semester practicum.

Students minoring in education must refer to the Department of High School, Middle School and Adult Education for specific requirements.

Art History Minor

Not open to art majors.

AR 201, AR 202 (required); select 5 courses from AR 302, AR 303, AR 305, AR 306, AR 307, AR 308, AR 311, AR 313, AR 314.

Program In Scientific and Technical Illustration

For details, see *Undergraduate Multidisciplinary and Pre-Professional Programs*.

GRADUATE PROGRAM

Master of Arts In Teaching

The Department of Art offers courses at the graduate level which may be taken in the Division's Master of Arts in Teaching and CAGS programs in Creative Arts. A diverse and appropriate program of study in art is ensured when the student works closely with the advisor in course selection.

More detailed information regarding this program may be found under the Division of Humanities and Creative Arts, as well as in the Graduate School section of this catalogue.

The departmental offerings listed below include the following courses which may not be taken for graduate credit: AR 110, AR 111, and AR 499.

COURSE OFFERINGS*

AR 110 Introduction to Art

3 crs.

Emphasis on painting, sculpture, and architecture; analysis of media, technical processes, and aesthetic principles; and discussion of style and its historical context. Assigned readings and museum visits. *May not be used to fulfill art major requirements.*

AR 111 Introduction to Architecture

3 crs.

A course for the non-art major. A study of domestic, religious, commercial, and government buildings throughout history. Attention given to elements of style and systems of architectural construction. *May not be used to fulfill art major requirements.*

AR 120 Basic Design

3 crs.

Studio exercises dealing with the fundamental elements and principles of design including color, shape, line, texture, balance and space and the organization of these elements in a work of art. Six hours per week.

AR 201 History of Art I

3 crs.

Major developments in art from the prehistoric through the late Gothic. Style is examined in relation to the historical process. Assigned readings and museum work.

AR 202 History of Art II

3 crs.

Major developments in art from the Renaissance through the Modern era. The historical approach supplemented with analysis of stylistic problems. Assigned readings and museum work.

AR 220 Drawing I

3 crs.

Basic concepts, perspective, modeling in light and dark, contour drawing. Exploration of various media: pencil, pen and ink, charcoal, ink wash, etc. Six hours per week.

AR 230 Painting I

3 crs.

Basic skills, picture organization, and painting techniques applied to assigned problems. Field trips to museums and galleries. Six hours per week.

AR 235 Watercolor Painting

3 crs.

Development of transparent watercolor techniques and pictorial composition. Six hours per week.

AR 240 Sculpture I

3 crs.

Design experimentation with traditional and new problems in a wide range of media. Six hours per week.

AR 250 Printmaking I

3 crs.

Prq.: AR 220 or consent of the Instructor

The basic methods, materials and processes used in printmaking. Six hours per week.

AR 271 Ceramic Design

3 crs.

Introduction to materials and techniques including handbuilding, wheel work, decorating, and firing.

*See page 83 for general information regarding course offerings.

AR 272 Wheel Throwing **3 crs.**

Prq.: AR 271 or consent of the Instructor

Advanced problems and experience on the potter's wheel, and aesthetic of ceramic design. Six hours per week.

AR 280 Metal Design I **3 crs.**

Basic design, construction, and forming techniques. Jewelry, constructed forms, sculpture. Six hours per week.

AR 290 Weaving I **3 crs.**

Introduction to traditional and contemporary weaving and related techniques. Assigned projects stress the aesthetic combined with the technical considerations of fiberwork. Six hours per week.

AR 291 Frame Loom Weaving **3 crs.**

Weaving on self-built looms. Emphasis given to traditional and contemporary tapestry techniques combined with the aesthetics of design in fiber. Six hours per week.

AR 300 Methods and Materials in Art: Preschool, K-6 **3 crs.**

Studio experiences with materials and processes related to the teaching of art in the public schools. Discussion of methodology and child art. Assigned readings and field trips to school art programs. Six hours per week.

AR 302 Greek and Roman Art **3 crs.**

Painting, sculpture, architecture and the minor arts. Historical antecedents and significant cultural influences in art.

AR 303 Medieval Art and Architecture **3 crs.**

A study of painting, architecture, sculpture and minor arts produced in Europe from the time of early Christianity to the Renaissance. Special emphasis on stylistic and cultural influences.

AR 304 Renaissance Art and Architecture **3 crs.**

The development of the arts of architecture, painting, and sculpture in the Early and High Renaissance, with special emphasis on their interrelationships and their relation to the artistic theories and cultural ideals of the time.

AR 305 Baroque Art **3 crs.**

Mannerist and Baroque styles of the sixteenth through eighteenth centuries will be studied, with emphasis on their origins in Italy and development through Western Europe.

AR 306 19th Century Art and Architecture **3 crs.**

A study of European Art and architecture from Neo-Classicism to Post-Impressionism. Attention given to the historical and cultural settings in which the art was produced.

AR 307 20th Century Art and Architecture **3 crs.**

A study of major movements in art and architecture of the 20th century. Attention given to the theoretical foundations for these modern artistic movements as well as their stylistic distinctions.

AR 308 American Art and Architecture **3 crs.**

Major trends in painting, sculpture, and architecture in America, 1620 to present, including regional styles, folk art, and crafts.

AR 310 Art and the Crafts in Special Education **3 crs.**

Art education theory and direct experience with a variety of materials and processes adapted to the needs of special education. Six hours per week.

Department of Art

AR 311 Primitive Art

3 crs.

Formal art properties and aesthetic qualities of primitive art; the physical, psychological, and sociological backgrounds which brought this art into being.

AR 312 Interior Design

3 crs.

Form and function of contemporary domestic and commercial spaces. Studio and field experiences related to problem analysis, construction techniques and materials. Six hours per week.

AR 313 Art and Architecture of Early New England

3 crs.

A study of domestic architecture and decorative arts of New England from its Pilgrim beginnings to the early 19th century. The course consists of a series of classroom slide lectures and field trips to historic houses throughout New England.

AR 314 Art History Study Tour

6 crs.

Selected topics in the history of art studied in museums and edifices of Europe. Preparatory classwork conducted on campus prior to travel. May be taken twice (12 s.h.) for workshops with different itineraries and course topics.

AR 315 Drawing/Painting: Coastal Maine Workshop

3 crs.

A two-week in-residence workshop in coastal Maine where shore lines, ocean, woods, and local villages interact to provide an aesthetic unique to the region. Drawing and/or painting activities will have a particular relationship to the natural surroundings. May be taken twice for a total of 6 credits.

AR 320 Drawing II

3 crs.

Prq.: AR 220 or consent of the Instructor

Advanced projects will be planned according to the individual's stylistic development and media preference. Six hours per week.

AR 330 Painting II

3 crs.

Prq.: AR 230 or consent of the Instructor

Advanced projects will be planned according to the individual's stylistic development. Six hours per week.

AR 340 Sculpture II

3 crs.

Prq.: AR 240 or consent of the Instructor

Advanced projects in design and media. Six hours per week.

AR 350 Printmaking II

3 crs.

Prq.: AR 250 or consent of the Instructor

Advanced projects planned according to the student's stylistic development and media preference. Six hours per week.

AR 351 Silkscreen

3 crs.

Prq.: AR 220 or consent of the Instructor

An introduction to traditional and innovative serigraph methods: glue, tusche, paper, cut film and photographic silk screen stencil. Six hours per week.

AR 352 Lithography

3 crs.

Prq.: AR 220 or consent of the Instructor

An exploration of the technical and aesthetic possibilities of lithography in black and white and color. Stone lithography, metal plates and paper plates will be utilized. Six hours per week.

AR 370 Clay and Glazes

3 crs.

Prq.: AR 271 or consent of the Instructor

Advanced work in the chemistry and compounding of clay and glaze materials. Six hours per week.

- AR 373 Advanced Ceramics** 3 crs.
Prq.: AR 271, 272, and consent of the Instructor
Advanced projects will be undertaken in chosen media under direct supervision of a faculty member. Course may be repeated three times. Six hours per week.
- AR 380 Metal Design II** 3 crs.
Prq.: AR 280 or consent of the Instructor
Advanced problems and techniques. Six hours per week.
- AR 390 Weaving II** 3 crs.
Prq.: AR 290 or consent of the Instructor
Advanced problems and techniques. Six hours per week.
- AR 420 Advanced Drawing** 3 crs.
Prq.: AR 220, 320, and consent of the Instructor
Advanced projects will be undertaken in chosen media under direct supervision of a faculty member. Course may be repeated three times. Six hours per week.
- AR 430 Advanced Painting** 3 crs.
Prq.: AR 230, 330, and consent of the Instructor
Advanced projects will be undertaken in chosen media under direct supervision of a faculty member. Course may be repeated three times. Six hours per week.
- AR 440 Advanced Sculpture** 3 crs.
Prq.: AR 240, 340, and consent of the Instructor
Advanced projects will be undertaken in chosen media under direct supervision of a faculty member. Course may be repeated three times. Six hours per week.
- AR 450 Advanced Printmaking** 3 crs.
Prq.: AR 250, 350, and consent of the Instructor
Advanced projects will be undertaken in chosen media under direct supervision of a faculty member. Course may be repeated three times. Six hours per week.
- AR 480 Advanced Jewelry Design** 3 crs.
Prq.: AR 280 or consent of the Instructor
Specialized techniques for the design and creation of jewelry in precious metals, and experimental construction techniques with these metals. Six hours per week.
- AR 481 Advanced Metals** 3 crs.
Prq.: AR 280, 380, and consent of the Instructor
Advanced projects will be undertaken in chosen media under direct supervision of a faculty member. Course may be repeated three times. Six hours per week.
- AR 490 Advanced Weaving** 3 crs.
Prq.: AR 290, 390, and consent of the Instructor
Advanced projects will be undertaken in chosen media under direct supervision of a faculty member. Course may be repeated three times. Six hours per week.
- AR 491 Art Education Seminar** 3 crs.
Prq.: ED 490 or consent of the Instructor
Limited to seniors who are student teaching in Art. Examination of various concepts in art education as well as historical and professional perspectives. Field trips, speakers, and workshops.
- AR 492 Topics in Art** 3 crs.
Prq.: Consent of the Instructor
Topics of limited or special interest in Art Education, Art History or Studio Art. Specific topics to be announced prior to registration. Course may be repeated for different topics.

AR 499 Directed Study in Art

1-3 crs.

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

AR 502 Research

credit to be arranged

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this Catalogue.

AR 503 Directed Study

credit to be arranged

Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this Catalogue.

AR 530 Advanced Painting

3 crs.

Prq.: 6 credits in painting or consent of the Instructor

Within the context of the classroom environment, students will move toward individual imagery development including exploration of new media and techniques as appropriate and supported by regular critiques by the instructor.

AR 540 Advanced Sculpture

3 crs.

Prq.: 6 credits in sculpture or consent of the Instructor

This is a sculpture course designed to challenge the student's grasp of the function of form and its expressive potential through the study of pure form and forms in nature. The materials used are clay, plaster, wood and metal.

AR 550 Advanced Printmaking

3 crs.

Prq.: 6 credits in printmaking or consent of the Instructor

Printmaking for those with previous experience. Course objectives and requirements will be planned on the basis of the individual student's interests and background.

AR 570 Advanced Ceramics

3 crs.

Prq.: 6 credits in ceramics or consent of the Instructor

Work in wheel-throwing, handbuilding, sculptural ceramics, clay technology, glaze chemistry, or studio management in an individualized program depending upon the student's previous course work, abilities, and interests.

AR 580 Advanced Metals

3 crs.

Prq.: 6 credits in metal or consent of the Instructor

Work in surface embellishment, construction, casting, and forming of non-ferrous metals. Emphasis on experimentation with new technology, materials, and techniques.

AR 590 Advanced Weaving

3 crs.

Prq.: 6 credits in weaving or consent of the Instructor

Advanced work in fiber planned in accordance with the student's prior course work and experience. Emphasis given to thorough exploration of color, design, and fiber selection in the execution of technically ambitious projects. Areas of study may include rug weaving, eight-harness double weaves, sculptural weaving and tapestry.

Department of English

Professor Donald Johnson, Chairperson
Professors: Wallace Anderson, Thomas Curley,
Joseph DeRocco, Charles McGinnis, Harold Ridlon,
Samuel Sheinfeld, Clifford Wood, Joseph Yokelson
Associate Professors: Marcia Anderson, Charles Angell,
Harold DeLisle, Charles Fanning, Grant Keener,
Joseph Liggera, James Nerney, Charles Nickerson,
Lois Poule, Paula Vadeboncoeur, Delija Valiukenas
Assistant Professors: Barbara Apstein, Judith Stanton

UNDERGRADUATE PROGRAMS

Bachelor of Arts

The program of study for English majors aims to give students an acquaintance with the history and background of English and American literature, an understanding of great literary works, and the ability to analyze, interpret, and appreciate what they read. With a broad foundation in English and American literature and a firm grasp of literary principles and techniques of critical analysis, an English major should be ready to pursue, in addition to the usual options of teaching and graduate study, a wide variety of fields including banking, law, medicine, publishing, government service, public relations, technical writing, creative writing, advertising, and business administration.

Department of English

For students who wish to engage in intensive study of the literature and culture of a particular period while still fulfilling the normal course requirements for the English major, the Department offers study options in Medieval, Seventeenth Century, and Nineteenth Century language and literature. The Department also offers an Honors Program for students who wish to pursue independent study culminating in a thesis.

The English Department participates in the multidisciplinary minors in American Studies, Canadian Studies, and linguistics. For specific information on these programs, consult the catalogue section *Undergraduate Multidisciplinary and Pre-Professional Programs*.

English Major

Majors must achieve a grade of C or above in EN 101, EN 102.

The major must earn 36 credits in English which must include three semester hours in each of the following:

- English literature before 1800;
- English literature after 1800;
- American literature;
- a seminar.

No more than six hours of 200 level literature courses can be credited toward the major.

Students majoring in English may meet the departmental foreign language requirement by satisfying intermediate level proficiency in any foreign language approved by the department.

English Minor

Traditionally considered the province of Liberal Arts majors, the English Minor also offers a suitable adjunct for students majoring in such specialized technical and professional fields as Computer Science, Social Sciences and Behavioral Sciences. Eighteen credits in English are required with at least nine in courses above the 200 level.

High School Education Minor

The requirements for teacher certification in Massachusetts have changed. Students graduating after August 1981 should consult with the department chairperson concerning changes in program requirements. Programs leading to initial certification will include a full semester of student teaching. Graduate programs leading to an additional certificate will

require the equivalent of a half-semester practicum. Specific course requirements for teacher of English, grades 9-12, are listed under the Department of High School, Middle School and Adult Education.

GRADUATE PROGRAMS

Master of Arts

The Department of English offers a program leading to the degree of Master of Arts in English. An undergraduate major in English, with at least twenty-four hours of above average work in the discipline is normally required for admission to this program. Students with deficient academic backgrounds are sometimes accepted into the program with the stipulation that these deficiencies be made up before work actually credited to the degree begins.

Upon acceptance into the program, the student will be assigned an advisor and given copies of the brochures entitled "Graduate Study in English" and "Recommended Readings for M.A. and M.A.T. Candidates." All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. In addition to meeting general degree requirements, the student must complete courses his advisor deems appropriate to his degree program, including at least one graduate seminar and EN 500 Theory and Discipline of English.

The departmental offerings listed below include the following courses which may not be taken for graduate credit: all courses in the 100 and 200 levels, EN 498, and EN 499.

Master of Arts In Teaching

The Department of English offers a program leading to the degree of Master of Arts in Teaching with a concentration in English, which is designed primarily to meet the varied needs of graduate students who are currently teaching or intend to teach at the secondary school level. Upon acceptance in the program, the student will be assigned an advisor and given copies of the brochures entitled "Graduate Study in English" and "Recommended Readings for M.A. and M.A.T. Candidates." All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. Degree requirements include a minimum of 12 appropriate graduate credits in designated areas of professional study (consult M.A.T. degree requirements in the Graduate School section of this catalogue); and a

Department of English

minimum of 21 appropriate graduate credits in English, approved by the program advisor on the basis of the background, interests, and needs of the student (including EN 301 Writing and the Teaching of Writing).

The departmental offerings listed below include the following courses which may not be taken for graduate credit: all courses in the 100 and 200 levels, EN 498, and EN 499.

COURSE OFFERINGS*

Successful completion of EN 101, EN 102 (or their equivalent) is a prerequisite to all other English courses.

EN 100 Basic Communication Skills I 0 crs.

This course will consist of an intensive review of basic communication skills, chiefly those of reading and writing.

EN 101, 102 English Composition I-II 3 crs. for each semester

The aim of English Composition is to develop greater awareness of the potential of the language, to encourage responsibility for its more effective use, and to provide opportunity for frequent directed practice in writing. Through the use of literary models such as essay, poem, short story, novel, and drama, students will be trained to think, speak, read and write more effectively. EN 101 is a prerequisite to EN 102.

EN 200 Advanced Composition 3 crs.

Expository writing is taught through frequent practice, analysis of models, and criticism by instructor and students. Opportunity is available for the student to develop his writing in any specific area he chooses, but emphasis will be on satire, argument, critical analysis, exposition, and description. Some attention will be given to the major developments in English prose style since 1600.

EN 201 Technical Writing 3 crs.

This course, geared closely to work being done by individual students in other disciplines, will help them develop techniques of composition essential to sophisticated written communication in those fields. Cooperation with faculty members in the natural sciences, behavioral sciences, and social sciences will be used to achieve clear, professional, written expression.

EN 211, 212 Literary Classics of Western Civilization I-II 3 crs. for each semester

Through classic examples of epic, myth, sacred history, parable, allegory, tragic and comic drama, philosophical dialogue, satire, lyric, and novel, the student will be introduced to the principal literary forms through which great writers, from ancient times to the twentieth century, have contributed to the religious, intellectual, moral, and esthetic traditions of Western culture.

EN 214 Classical Literature in Translation 3 crs.

The course will study the important Greek and Roman Writers including, among others, Homer, Sophocles, Plato, Euripides, Cicero, Horace, and Virgil. The focus will be on rediscovering the grandeur and glory of classical civilizations.

EN 215 Comparative Drama 3 crs.

A study of plays of different periods dealing with the same mythological or historical themes. Included will be plays on the Oedipus theme, from Sophocles to Cocteau; plays about the House of Atreus, from Aeschylus to Sartre; plays about Anthony and Cleopatra, from Shakespeare to Shaw; and plays about Joan of Arc, from Schiller to Anouilh. The larger purpose of the course will be to explore the freedom within limits of an artist who chooses to work with established plot materials.

*See page 83 for general information regarding course offerings.

EN 221, 222 Major English Writers I-II

3 crs. for each semester

Representative works by the major English writers will be studied both formally and historically to develop an understanding of the genres, style, and themes, which characterize English imaginative and critical writing. The first semester will examine works from the Anglo-Saxon period to the eighteenth century; the second, works of the nineteenth and twentieth centuries.

EN 225 The Theme of Love

3 crs.

Various literary treatments of the theme of love will be approached through such works as the following: Chaucer, *Troilus and Criseyde*; Donne, Poetry; Shakespeare, *Romeo and Juliet*, *Anthony and Cleopatra*; Dryden, *All for Love*; Byron, *Don Juan*, *Cantos I-IV*; Bronte, *Wuthering Heights*; Browning Poems; Henry James, *The American* or *The Portrait of a Lady*; Lawrence, *Sons and Lovers*; Hemingway, *A Farewell to Arms*.

EN 230 Creative Writing

3 crs.

Fiction, non-fiction, verse, drama or any experimental forms may be undertaken by the student. Class discussion will center on the examination of both professional and student efforts. Frequent conferences will be held with individual students.

EN 231, 232 Major American Writers I-II

3 crs. for each semester

A general survey of American literature from the colonial beginnings to the present. Writers such as Franklin, Edwards, Irving, Poe, Hawthorne, Emerson, Whitman, Dickinson, Twain, James, Frost, Eliot, Faulkner, and Hemingway will be studied in their social and cultural contexts.

EN 235 The Short Novel

3 crs.

Prq.: Consent of the Instructor

Works selected from such writers as James, Mann, Kafka, and Chekov.

EN 238 The Short Story

3 crs.

The primary focus will be on the examination of the relationships between form and content in several British, American, and continental short stories. A secondary concern will be the historical development of the genre.

EN 241, 242 Shakespeare I-II

3 crs. for each semester

A general introduction to Shakespeare's plays set against the background of the time. Representative selections from the tragedies, comedies, and histories will be studied in detail.

EN 251 Literary Figures and Problems

3 crs.

The course will provide the student with the opportunity to study particular literary figures and problems, viewing them from a broad historical and critical perspective.

EN 252 Literary Types

3 crs.

The course will approach literature by type, meaning 'type' to signify both genre and form. A semester's study might focus on biography and autobiography, the novel, the epic, comedy, tragedy, or satire. The reading will include diverse works representative of a particular type.

EN 261 Film Study: Introduction to the Art

3 crs.

The course will provide the student with a critical evaluation of major American and foreign films and directors from the silent era to the present. The study will be directed toward developing in the student standards of critical awareness and esthetic appreciation. In addition to film viewing, there will be readings in film theory, interpretation, and criticism.

EN 262 Film Study: Literature into Film

3 crs.

The course will focus on the way in which literature is adapted to film. Viewing and reading works in both media will be required.

EN 280 Journalism

3 crs.

Students will be helped to develop skills in copyediting and proofreading with special emphasis given to objective news story writing. Some attention will be given to dramatic criticism and sports writing. The workshop approach will be used.

EN 283, 284 Major Canadian Writers in English I-II

3 crs. for each semester

A survey of major Canadian writings in English from the beginning to the present, placing the works against the background of general Canadian culture.

EN 301 Writing and the Teaching of Writing

3 crs.

Writing, criticism, creativity. Student participation in criticism as a learning device and as a means to a reasonable load for the teacher. Objective is to improve the student's writing skill by the same techniques he can use in teaching the skill. Text by Don Murray.

EN 305 History of the English Language

3 crs.

Origins and development of English. Selected readings in Old and Middle English.

EN 309 Early American Literature

3 crs.

The course will focus on selected readings from Colonial beginnings through James Fenimore Cooper. Offered in alternate years.

EN 312 Studies in Modern British Fiction

3 crs.

Prq.: EN 222 or consent of the Instructor

Readings in selected twentieth-century British novelists, such as E.M. Forster, D.H. Lawrence, James Joyce, and Graham Greene.

EN 314 Medieval English Literature

3 crs.

Prq.: EN 211, or EN 221, or consent of the Instructor

Selected readings in non-Chaucerian writing: Langland, Gower, romance, lyrics, drama.

EN 320 Chaucer

3 crs.

Prq.: EN 222 or consent of the Instructor

Troilus and Criseyde and selected readings from the *Canterbury Tales*.

EN 321 The Age of Pope

3 crs.

The literature of the neo-classical period, with emphasis on the works of Pope, Swift, Gay, Addison and Steele.

EN 322 The Age of Johnson

3 crs.

The writings of several major figures, such as Johnson, Boswell, Fielding, Richardson and others.

EN 323 Introduction to Linguistics

3 crs.

The generative-transformational theory of syntactic structure as applied to the English language. Selected readings on various aspects of linguistics.

EN 329 Modern American Fiction

3 crs.

The course will focus on short fiction and the novel between the two World Wars.

EN 330 Recent American Fiction

3 crs.

The course will focus on short fiction and the novel since World War II. Such writers as Mailer, Bellow, Updike, Roth, and others will be studied.

EN 331 U.S. Literature in the Nineteenth Century I

3 crs.

Selected readings in Cooper, Hawthorne, Poe, Emerson, Thoreau, Whitman, Dickinson.

EN 332 U.S. Literature in the Nineteenth Century II

3 crs.

Prq.: EN 231 or EN 331

The novels and tales of Melville, Twain, Hawthorne, and James.

EN 333 Realism and Naturalism in American Literature

3 crs.

Studies in the fiction of Howells, James, Stephen Crane, Frank Norris, Theodore Dreiser, and in the twentieth-century extensions of realism in the novels of writers such as Sinclair Lewis, Sherwood Anderson, Dos Passos and Farrell. Attention will also be paid to the proselytizing criticism of the first generation of realists, notably James' prefaces and Howells' essays.

EN 335 Elizabethan and Jacobean Drama

3 crs.

Reading and discussion of a number of plays with attention to contemporary social developments as well as to the historical development of the English Play.

EN 340 Literature of the English Renaissance

3 crs.

The non-dramatic literature of the Age of Shakespeare including the reading of works by such writers as Sidney, Spenser, Nashe, Marlowe, and Drayton. Although the emphasis will be on textual analysis, the historical, social, and cultural background of the period will also be considered.

EN 341 Literature of the Continental Renaissance

3 crs.

Selected works of Petrarch, Boccaccio, Machiavelli, Erasmus, Castiglione, Rabelais, Cellini, Montaigne, Cervantes, and Ronsard representing prevailing literary themes and techniques. Lectures and discussions on the art, history, philosophy, and music of the age will be offered by faculty in these disciplines.

EN 342 Shakespeare: Histories and Comedies

3 crs.

This course provides the student of Shakespeare with examples of Shakespeare's art in dominant Renaissance dramatic forms and with some of his recurring thematic concerns. In addition, study of the Histories and Comedies demonstrates Shakespeare's growth in the dramatic use of language. Plays for study will include the *Comedy of Errors*, *Two Gentlemen of Verona*, *Much Ado About Nothing*, *As You Like It*, *Twelfth Night*, *Richard III*, *Richard II*, *Henry IV*, *Parts I and II*, and *Henry V*.

EN 343 Shakespeare: Tragedies and Late Plays

3 crs.

This course offers the student of Shakespeare studies in the various dimensions of the tragic vision of man. In addition, study of the Late Plays provides the student with examples of dramatic works that proceed beyond the tragic dimension. Selected plays will include *Hamlet*, *King Lear*, *Othello*, *Macbeth*, *Anthony and Cleopatra*, *Measure for Measure*, *The Winter's Tale*, and *The Tempest*.

EN 346 Southern Literary Renaissance

3 crs.

Beginning with the Fugitives in the 1920's (Robert Penn Warren, Allen Tate, John Crowe Ransom, and Donald Davidson primarily) and their concern with the problem of the Southern writer's identity as a Southerner and an artist, the course will focus on the writings of such contemporary figures as William Faulkner, Tennessee Williams, Katherine Anne Porter, Flannery O'Connor, Carson McCullers, Eudora Welty, and Peter Taylor.

EN 350 Modern English Novel

3 crs.

A selective survey of major contributors to the English novel from Joseph Conrad through the school of the "Angry Young Men." Major attention will be given to the analysis of specific texts.

EN 353 Modern European Drama

3 crs.

Main forces in Modern European drama starting with Ibsen.

EN 356 Modern American Drama

3 crs.

Selected plays of dramatists from O'Neill to Albee.

EN 360, 361 The English Novel I-II

3 crs. for each semester

The development of the English novel, including the works of Defoe, Richardson, Fielding, Smollett, Sterne, Austen, and Scott in the first semester, and Dickens, the Brontes, Thackeray, Eliot, Trollope, Conrad, and Hardy in the second semester.

EN 365 Victorian Prose and Poetry

3 crs.

The major emphasis will be placed on the poetry of Tennyson, Browning, and Arnold, but the works of other nineteenth-century poets such as Hopkins and Hardy will also be read and discussed. The essays of Carlyle, Arnold, Newman, Huxley, and others will be read in conjunction with the poetry.

EN 366 Tennyson, Browning, and Arnold

3 crs.

These major nineteenth-century authors will be studied in some detail, with particular reference to the historical, social, and cultural milieu within which they wrote.

EN 367 English Literature of the Late Victorian and Edwardian Periods

3 crs.

The major writers of the late nineteenth and early twentieth centuries will be examined from an esthetic, social, and intellectual point of view with readings in such novelists as Gissing, James, Wilde, Beerbohm, Carroll, Wells, Hardy, Corvo, Forster, and Conrad, and such poets as Rossetti, Swinburne, Morris, Hopkins, and Yeats.

EN 370 Seventeenth Century Literature

3 crs.

The course is an introduction to the prose and poetry of the seventeenth-century in England, exclusive of Milton. Such writers as Donne, Jonson, Bacon, Burton, Browne, and Dryden will be examined, and various persistent elements, such as the classical influence, will be explored.

EN 380 Milton

3 crs.

The main works of Milton: *Paradise Lost*, *Paradise Regained*, and *Samson Agonistes*, the minor poetic works, and selected prose.

EN 383 Modern Irish Literature

3 crs.

Irish writing from 1890 to the present, with special emphasis on the works of Yeats, Synge, O'Casey, Joyce, O'Connor, and O'Faolain.

EN 384 Modern Canadian Fiction in English

3 crs.

Intended as a broad introduction to the growing achievement of twentieth-century Canadian Fiction, this course will stress the novels and short stories of such writers as Margaret Atwood, Morley Callaghan, Frederick Grove, Margaret Laurence, Hugh McLennan, Brian Moore, Farley Mowat, Mordecai Richler, Charles Roberts, Sinclair Ross, and will attempt to examine their works against their national background and within the framework of the world community of fiction.

EN 385 Canadian Poetry in English

3 crs.

A broad survey of recent Canadian Poetry from 1945-1970 with particular emphasis on those poets most vital in shaping a new and exciting international reputation for Canadian Poetry: Gwendolyn MacEwen, Margaret Atwood, Leonard Cohen, John Newlove, Earle Birney, James Reaney, George Bowering, F.R. Scott. Texts such as *Poetry Between the Wars*, edited by Milton Wilson, and *Poets of Contemporary Canada*, edited by Eli Mandel will be used.

EN 386 English Romantic Poets

3 crs.

Selected poetry and prose of Wordsworth, Coleridge, Shelley and Keats will be studied with the principle object of understanding the character and modes of expression of each poet's imaginative vision. Consideration will be given to historical background and to developments in philosophy and esthetic theory which have a direct bearing on Romantic poetry.

EN 387 British Commonwealth Literature 3 crs.

Literature of the British Commonwealth nations will be studied. In a given year, the emphasis may be on such literature as African, Australian, Canadian, Caribbean, or Indian.

EN 390 History of Literary Criticism 3 crs.

The history of literary criticism from Aristotle to the present. Emphasis will be placed on those persistent esthetic, psychological, social, and cultural patterns which have helped shape the literature of our own age.

EN 391 Modern Literary Criticism 3 crs.

Several twentieth-century approaches to literary analysis, interpretation, and evaluation. Particular attention will be given to literary concepts derived from psychoanalysis, sociology, anthropology, semantics, philosophy, and theology. Such topics as existentialist criticism, the "new criticism", and the theory of myth and symbol will be considered.

EN 393 Modern British Poetry 3 crs.

The major British poets of the twentieth century, with particular emphasis on the works of Hopkins, Yeats, Eliot, and Thomas.

EN 394 Modern American Poetry 3 crs.

The major American poets of the twentieth century, with particular emphasis on the works of Robinson, Frost, Crane, Auden, Williams, and Stevens.

EN 395 Studies in Recent American Poetry 3 crs.

Intensive study of some of the major figures in American poetry of the past ten or fifteen years: Theodore Roethke, Robert Lowell, and John Berryman will certainly be included. Also, three or four poets to be selected from the following list: Richard Eberhart, Richard Wilbur, W.D. Snodgrass, W.S. Merwin, Sylvia Plath, James Wright, James Dickey, Randall Jarrell, Gary Snyder.

EN 397 Film Study: The Director's Art 3 crs.

The course will offer an intensive study of the works of one or more directors who have significantly extended or added to film vocabulary.

EN 398 Film Study: Genres 3 crs.

The course will focus on films that have contributed to the definition of such cinematic genres as the western, the gangster movie, the documentary, the light comedy, and others.

EN 400 Techniques of Literary Research 3 crs.

Research procedures, with special reference to the materials and methods of literary style and publication. Various critical approaches to literature will be examined, and some evaluation of scholarly procedure will be made.

EN 420 English Education Seminar 3 crs.

Limited in enrollment to seniors contemplating secondary school teaching. The problems of English education in a rapidly changing social, cultural, and intellectual environment. Reports, small group discussions, and meetings with professionals in the field.

EN 430 Comparative Grammar 3 crs.

A detailed study and evaluation of traditional, structural, and generative models of grammar, emphasizing contemporary issues, problems, and debates in linguistic theory.

EN 435 Semantics 3 crs.

Prq.: EN 323

An investigation of language and meaning from various points of view in linguistics, literary criticism, rhetoric, philosophy, and anthropology.

EN 440 Topics in Linguistics

3 crs.

Various special topics of current interest in linguistics will be offered from time to time, including language change, metaphor, stylistics, non-human communication, psycholinguistics, psycholinguistics and reading, and sociolinguistics. May be taken more than once.

EN 491 Seminar in Canadian Literature

3 crs.

This seminar, open to qualified juniors, seniors, honors candidates, and graduate students, will pursue in depth particular themes and authors in Canadian literature, the topic changing from year to year.

EN 494 Seminar

3 crs.

The seminar will treat selected topics in language and literature.

EN 495 Seminar in English Literature

3 crs.

This seminar, primarily for seniors, honors candidates, and graduate students, will pursue in depth certain themes and authors in English literature.

EN 496 Seminar in American Literature

3 crs.

This seminar, primarily for seniors, honors candidates, and graduate students, will pursue in depth certain themes and authors in American literature.

EN 497 Seminar in World Literature

3 crs.

This seminar, primarily for seniors, honors candidates, and graduate students, will pursue in depth certain themes and authors in world literature, the topic changing from year to year.

EN 498 Internship in English

3-15 crs.

Prq.: Consent of the Department

Off-campus work-study experience in areas related to the expanding discipline of English. In-depth exposure to such fields as editing, journalism, media, public relations, technical writing and the like. Effort is made through this program to expand the occupational potential of the English major. Internship credits are not applicable to the 36 credits required for the major.

EN 499 Directed Study in English

1-3 crs.

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

EN 500 Theory and Discipline of English

3 crs.

This course will examine the backgrounds and techniques of scholarship in the field of literature. Some acquaintance with critical approaches to literature, as well as comprehensive experience in the major genres and periods of English and American literature, will be assumed.

EN 502 Research

credit to be arranged

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

EN 503 Directed Study

credit to be arranged

Designed for the graduate student who desires to study selected topics in his field. For details consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

EN 529 Donne and the Metaphysical Poets

3 crs.

An intensive study of those seventeenth-century poets known as the metaphysicals: Donne, Herbert, Vaughan, Marvell and Crashaw.

EN 537 Studies In British Romanticism

3 crs.

A study of the prose and poetry of the romantic period, focusing on such figures as Coleridge, Wordsworth, Byron, Hazlitt, Lamb, DeQuincey, and others.

EN 541 Studies in the Novel

3 crs.

A close reading of the major and minor works of several novelists chosen from a single period. Emphasis will be placed on the development of each novelist within a specific literary and historical context. The period under consideration will vary from year to year.

EN 543 Studies in Eighteenth-Century British Poetry

3 crs.

A study of the development of British poetry in the eighteenth century, focusing on such poets as Pope, Gay, Thomson, Johnson, and Cowper.

EN 551 American Transcendentalism

3 crs.

An investigation of the development and influence of American Transcendentalism in the literature of Emerson, Thoreau, Alcott, Margaret Fuller, Theodore Parker, and others.

EN 562 Studies in Modern Drama

3 crs.

An investigation of the developments of various movements of modern drama in the works of Ibsen, Strindberg, Shaw, O'Neill, Pirandello, Beckett, Genet, Brecht, and other experimental and traditional playwrights.

EN 570 Graduate Seminar in American Literature

3 crs.

An in-depth study of a particular author, group of authors, or theme in American literature. Topics will change from year to year.

EN 580 Graduate Seminar in English Literature

3 crs.

An in-depth study of a particular author, group of authors, or theme in English literature. Topics will change from year to year.

EN 590 Graduate Seminar in World Literature

3 crs.

An in-depth study of a particular author, group of authors, or theme in world literature. Topics will change from year to year.

Department of Foreign Languages

Associate Professor: Jacqueline Enos, Chairperson
Professor Robert Arruda

Associate Professors: Robert Briggs, Anthony Cotugno, Joseph Giannini,
Stanley Hamilton, Lenore Padula, Barbara Ward

Assistant Professors: Dale Dawley, Christiana Reordan
Exchange Professor from Germany: Monika Sutter

UNDERGRADUATE PROGRAMS

Bachelor of Arts

The Foreign Language Department offers students an opportunity to gain practical working knowledge of one or more of six foreign languages. Students may choose any of these six languages offered by the department unless otherwise restricted by the requirements of their academic major. All students should check the specific foreign language requirement of their academic major.

The department currently offers undergraduate majors in French or Spanish with academic minors possible in French, German, Spanish, Italian, Russian, and Portuguese. The department majors seek to develop a fluent command of the four language skills, and a broad acquaintance with the salient characteristics of the literature and civilization of the language being studied.

A grade of C or above in the 181-182 course sequence is required for continuation as a language major. 36 semester hours are required for a foreign language major. In the fall of the sophomore, junior and senior years, language majors will participate in a departmental interview conducted in the foreign language. This interview is for diagnostic purposes. Foreign language majors are required to take all courses in numerical sequence, unless otherwise arranged with an advisor subject to approval by the head of the department.

For all prerequisites, equivalent course credit or preparation will be accepted.

French Major

LF 181-182, LF 201, LF 252, LF 281, LF 301, LF 352, LF 381-382 (with a C or better if a Secondary Education minor), LF 401, LF 451; additional courses to complete credits for the major are selected in conjunction with the departmental advisor.

Spanish Major

LS 181-182, LS 201-202, LS 251-252, LS 281-282 (with a C or better if a Secondary Education minor), LS 292; additional courses to complete credits for the major are selected in conjunction with the departmental advisor.

Language Minor

Language minors are required to take 18 semester hours in the foreign language beginning with the 151-152 level course. The choice of subsequent courses may be determined in consultation with the department head.

High School Education Minor

The requirements for teacher certification in Massachusetts have changed. Students graduating after August 1981 should consult with the department chairperson concerning changes in program requirements. Programs leading to initial certification will include a full semester of student teaching. Graduate programs leading to an additional certificate will require the equivalent of a half-semester practicum. Specific course requirements for teachers of French, grades 9-12, and Spanish, grades 9-12, are listed under the Department of High School, Middle School and Adult Education.

Overseas Study Opportunities

The Department of Foreign Languages urges its majors and minors to study abroad and can offer information on available study plans. Any student contemplating study abroad should consult the department with all pertinent documentation. Final acceptance of credit will be determined upon receipt of official transcripts and supporting material and, in some cases, may not be equivalent to the credits earned in a regular semester or year at Bridgewater.

GRADUATE PROGRAMS

Master of Arts in Teaching

The Department of Foreign Languages offers a program leading to the degree of Master of Arts in Teaching with a concentration in French or Spanish. The department requires an interview of all prospective candidates before making its final recommendation regarding admission to the program. The latter is designed primarily to meet the varied needs of graduate students who are currently teaching or intend to teach at the secondary school level. It also prepares students for further graduate work in foreign languages. All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. Degree requirements include a minimum of 12 appropriate graduate credits in designated areas of professional study (consult the M.A.T. degree requirements in the Graduate School section of this catalogue), and a minimum of 18 appropriate credits in a single language (credits approved by the program advisor on the basis of the background, interests, and needs of the student). Language courses need not be taken in sequence.

The departmental offerings listed below include the following courses which may not be taken for graduate credit: all courses at the 100 level, LS 495, FL 300, and FL 499.

COURSE OFFERINGS*

FRENCH

LF 101, 102 Elementary French I-II **3 crs. for each semester**

An introduction to the essentials of written and spoken French.

LF 151, 152 Intermediate French I-II **3 crs. for each semester**

Prq.: LF 102

Stress on essential grammatical points, oral work, and reading knowledge of the language.

LF 181, 182 Advanced French I-II **3 crs. for each semester**

Prq.: LF 152

A concentration on more advanced aspects of the spoken and written French language. Oral practice through individual classroom participation. Conducted in French.

LF 201 French Literature of the Middle Ages **3 crs.**

Prq.: LF 182

A survey of representative works of the Middle Ages. Conducted in French.

LF 211 Twentieth-Century French-Canadian Writers **3 crs.**

Prq.: LF 151-152 or its equivalent

A study in depth of certain Canadian writers in French, with special emphasis on the "rural" novel and the poetry of the search for an identity.

LF 222 Introduction to French-Canadian Literature **3 crs.**

Prq.: LF 151-152 or its equivalent

A survey of literature of Canada written in French, from writing of the clergy and missionaries to the novelists, poets and dramatists of the present day.

**LF 231 Eminent Realists and Naturalists in 19th Century
French Literature in English Translation** **3 crs.**

A study of realism and naturalism (1850-1900), with special attention given to Flaubert, the Goncourts, Maupassant, Zola, and Huysmans.

LF 241 French Literature of the Absurd in English Translation **3 crs.**

A study of French "absurd" literature in translation, from Flaubert's *A Simple Heart* to "anti-literature" of the "new" novel. Emphasis on theatre.

LF 252 Sixteenth Century French Literature **3 crs.**

Prq.: LF 201

A study of the poetry, prose, and theatre of the sixteenth century, noting the transition from the late Middle Ages through the Renaissance. Conducted in French.

**LF 261 Introduction to the Civilization and Language
of French Canada** **3 crs.**

Prq.: LF 151-152 or its equivalent

A composite view of the extension of French civilization in Canadian history, daily life, arts and sciences, literature, technology and above all, a study of differences in language usage.

*See page 83 for general information regarding course offerings.

LF 281-282 French Conversation and Civilization I-II **3 crs. for each semester**

Prq.: LF 182

Improvement of oral expression and pronunciation. French Civilization discussion topics for vocabulary building and application of structures learned. Conducted in French.

LF 301 Seventeenth Century French Literature **3 crs.**

Prq.: LF 252

The principle historical events and representative authors and genres of France of the seventeenth century will be studied with the objective of understanding Classicism as a literary movement. Conducted in French.

LF 352 Eighteenth Century French Literature **3 crs.**

Prq.: LF 301

The literary contributions of the Enlightenment and Encyclopedists to the French Revolution and pre-romanticism. Conducted in French.

LF 381 Applied French Linguistics and Phonetics **3 crs.**

Prq.: LF 182

A linguistic approach to the sounds of the French language with emphasis on a mastery of the elements of correct standard pronunciation. Conducted in French.

LF 382 Advanced French Composition and Grammar **3 crs.**

Prq.: LF 381

A thorough study of French grammar to develop written and oral proficiency in the French language. Conducted in French.

LF 401 Nineteenth Century French Literature **3 crs.**

Prq.: LF 352

Through representative works, the entire nineteenth century will be surveyed with special emphasis on principal literary movements: Romanticism, Realism, and Symbolism. Conducted in French.

LF 451 Twentieth Century French Literature **3 crs.**

Prq.: LF 352

A discussion of literary trends and readings of well-known authors. Individual reports. Barres, France, Gide, Proust, Claudel, Romain, Sartre, Camus. Conducted in French.

LF 495 Seminar in French Literature **3 crs.**

Prq.: Permission of the Instructor

Primarily for French majors or minors of senior standing. Honors candidates or graduate students. The seminar will peruse, in depth, certain themes and authors in French literature. The topics will change from year to year. Offered as needed. Conducted in French.

LF 501, 502 Graduate Seminar in French Literature I-II **3 crs. for each semester**

An in-depth survey of approximately eight centuries of French Literature, with emphasis on oral and written analyses of special literary problems. Designed primarily for MAT degree candidates, already having some knowledge of French literature. Conducted in French.

LF 503 Personalities in French Civilization **3 crs.**

Prq.: Consent of the Instructor

A review of French civilization through analyses of the contributions of a selection of her national heroes. Intended for, but not necessarily limited to, holders of an undergraduate degree in French. Conducted in French.

LF 504 French Civilization Since 1944

3 crs.

Social, political, geographic, economic and literary dimensions of French civilization since the second World War. Conducted in French.

GERMAN

LG 101, 102 Elementary German I-II

3 crs. for each semester

An introduction to the study of the German language. Emphasis on correct pronunciation and basic grammar.

LG 151, 152 Intermediate German I-II

3 crs. for each semester

Prq.: LG 102

A systematic review of basic German grammar. Graded reading selections and an introduction to aspects of German culture.

LG 181, 182 Advanced German I-II

3 crs. for each semester

Prq.: LG 152

Introduction to a more advanced level of the literature. Representative authors will be read and discussed.

LG 191, 192 Scientific German I-II

3 crs. for each semester

Prq.: LG 102

An introduction to the reading and translating of scientific material. Open to science majors as a substitution for LG 151, 152.

LG 201, 202 Survey of German Literature I-II

3 crs. for each semester

Prq.: LG 182

German literature from its earliest beginnings to the present day. Representative works of the principal literary periods will be read and discussed. Conducted in German.

LG 262 German Life and Literature Under Hitler in English

3 crs.

This course will treat German life and literature prior to the rise of Hitler and show the influence of the Nazi period on the life styles and literary developments in all German speaking countries. Readings in German or English will accompany the eye-witness commentaries. Conducted in English.

LG 272 Aspects of German Culture and Civilization in English

3 crs.

The course will examine and analyze selected aspects of German culture and civilization in terms of the importance these have had in shaping the development of the German-speaking nations. Conducted in English.

LG 282 German Conversation and Civilization

3 crs.

Prq.: LG 182

Designed to develop further the student's command of spoken German. Discussion topics will center upon aspects of German civilization and culture. Conducted in German.

LG 301 Modern German Literature

3 crs. for each semester

Prq.: LG 202

Ideas and literary currents of the modern period as expressed in the works of representative authors. Conducted in German.

LG 310 The Modern German Novel in English Translation

3 crs.

The German novel since World War I with emphasis on works by Thomas Mann, Herman Hesse, Gunter Grass, Heinrich Boll.

LG 320 Contemporary German Drama in English Translation 3 crs.

Trends in twentieth century drama before and after World War II including works by Bertold Brecht, Friedrich Durrenmatt, Peter Weiss, and others.

LG 330 Major German Writers in English Translation 3 crs.

Selected works by major German writers.

LG 340 The German Novella in English Translation 3 crs.

The novella as a literary genre and selected works by major writers.

LG 351 German Romanticism 3 crs.

Prq.: LG 202

Romanticism as a literary movement. A study of its philosophical basis, themes and forms as reflected in representative works of the period. Conducted in German.

LG 460 Seminar in German Literature 3 crs.

Prq.: Consent of the Instructor

Study of particular authors and their works and/or selected literary movements. Topics vary; course may be repeated; limited enrollment. Conducted in German.

ITALIAN

LT 101, 102 Elementary Italian I-II 3 crs. for each semester

An aural-oral approach to the grammar of the Italian language. Emphasis is on the mastery of correct pronunciation and of fundamental grammatical points to ensure a basic, oral, reading, and written command of the language.

LT 151, 152 Intermediate Italian I-II 3 crs. for each semester

Prq.: LT 102

A continuation of Elementary Italian, with stress on essential grammatical features, oral work, and reading and writing development in the language.

LT 181, 182 Advanced Italian I-II 3 crs. for each semester

Prq.: LT 152

A review of basic grammar and presentation of more advanced structural elements. Stress on improvement of compositional and aural-oral skills. Varied cultural reading selections. Conducted in Italian.

PORTUGUESE

LP 101, 102 Elementary Portuguese I-II 3 crs. for each semester

An introduction to the basic skills of reading and writing, and the development of aural comprehension and correct oral pronunciation.

LP 151, 152 Intermediate Portuguese I-II 3 crs. for each semester

Prq.: LP 102

A review of basic grammar and pronunciation and a more advanced study of these two aspects of the language. Reading, writing, and oral proficiency will be stressed.

LP 181, 182 Advanced Portuguese I-II 3 crs. for each semester

Prq.: LP 152

Stress on improvement of compositional and aural-oral skills. Literary texts from Brazilian and Portuguese literature. Conducted in Portuguese.

RUSSIAN

LR 101, 102 Elementary Russian I-II **3 crs. for each semester**

Introduction to Slavic Civilization. Familiarization with Russian script, pronunciation, and basic structure. Programmed units leading to reading of newspapers and short stories of Russian masters.

LR 151, 152 Intermediate Russian I-II **3 crs. for each semester**

Prq.: LR 102

Review and expansion of fundamentals with more detailed reading and analysis of structure. Scientific Russian in other majors as desired.

LR 181, 182 Advanced Russian I-II **3 crs. for each semester**

Prq.: LR 152

Translation of scientific and literary texts, directed reading and reports. Translation methods and practice. Improving oral and writing skills. Conducted in Russian.

SPANISH

LS 101, 102 Elementary Spanish I-II **3 crs. for each semester**

An introduction to the essentials of Spanish pronunciation and grammar. Reading, writing, aural and oral proficiency will be stressed.

LS 110 Conversational Spanish for Medical Personnel **3 crs.**

This will be a one semester course specifically designed for nursing personnel with respect to approach and content. The approach will be oral; the goals are those of speaking and understanding. The content deals with situations relevant to the nursing profession, and is conducted in Spanish. *Does not satisfy GER.*

LS 151, 152 Intermediate Spanish I-II **3 crs. for each semester**

Prq.: LS 102

A review of basic grammar and correct pronunciation to further an aural-oral command of the language. Hispanic readings will be introduced.

LS 161, 162 Practical Spanish I-II **3 crs. for each semester**

Prq.: LS 102 or consent of Instructor

An oral emphasis approach to learning Spanish for career related situations involving social work, police and fire departments, schools, hospitals and community agencies.

LS 181, 182 Advanced Spanish I-II **3 crs. for each semester**

Prq.: LS 152

A more detailed study of Spanish grammar. Vocabulary development, correct pronunciation, and improved aural-oral skills. Reading from Hispanic world. Conducted in Spanish.

LS 201, 202 Survey of Spanish Literature I-II **3 crs. for each semester**

Prq.: LS 182

Major literary movements, works and authors of penninsular Spanish literature from earliest times to the present. Conducted in Spanish.

LS 210 Latin American Poetry in English Translation **3 crs.**

Modernism and after. Modernist, post modernist and vanguard poetry. The major figures: Martí, Dario, Mistral, Neruo, Vallejo, Paz.

LS 220 The Contemporary Latin American Novel 3 crs.
In English Translation

The development of the Latin American novel, focusing on post WW II authors: Cortazar, Garcia Marquez, Vargas Llosa, Fuentes, Carpentier, etc.

LS 230 Contemporary Latin American Short Story 3 crs.
In English Translation

Reality and Fantasy as the focus of the stories of Borges, Cortazar, Fuentes, Rulfo, Carpentier, Arreola, Asturias, Garcia Marquez, Guimaraes Rosa.

LS 251, 252 Survey of Spanish-American 3 crs. for each semester
Literature I-II

Prq.: LS 182

A representative study of the literature of the Colonial period, the independence period, the eighteenth century, Modernism, and the contemporary period. Conducted in Spanish.

LS 281 Advanced Composition 3 crs.

Prq.: LS 182

Development of individual written expression. Utilization of literary texts as an approach to composition by focusing on vocabulary, analysis of style and context. Conducted in Spanish.

LS 282 Spanish Phonetics and Conversation 3 crs.

Prq.: LS 182

Improvement of oral proficiency by a systematic study of the sounds of correct pronunciation. Conducted in Spanish.

LS 291 Spanish Civilization 3 crs.

Prq.: LS 182

An introduction to the history, geography, social institutions, and culture of Spain. Assigned compositions. Conducted in Spanish.

LS 292 Spanish-American Civilization 3 crs.

Prq.: LS 182

An introduction to the history, geography, social institutions, and culture of Spanish America. Assigned compositions. Conducted in Spanish.

LS 301 The Golden Age of Spanish Literature 3 crs.

Prq.: LS 182

A study of the poetry, prose and theatre from the second half of the sixteenth century to the Baroque period. Conducted in Spanish.

LS 310 Contemporary Latin American Short Story 3 crs.

Prq.: LS 251-252 or equivalent

Reality and fantasy as the focus of the stories of Borges, Cortazar, Fuentes, Rulfo, Carpentier, Arreola, Asturias, Garcia Marquez. Conducted in Spanish.

LS 320 Latin American Poetry 3 crs.

Prq.: LS 251-252 or equivalent

Modernism and after. Modernist, post modernist and vanguard poetry. The major figures: Marti, Dario, Mistral, Neruo, Vallejo, Paz. Conducted in Spanish.

LS 351 Cervantes 3 crs.

Prq.: LS 202

A study of the man and his works, with special emphasis on Don Quixote. Conducted in Spanish.

LS 381 The Middle Ages

3 crs.

Prq.: LS 182

A study of the evolution of Spanish literature through the first half of the sixteenth century. Romances, Poema del Cid, La Celestina, El Libro de Buen Amor. Conducted in Spanish.

LS 401 Nineteenth Century Spanish Literature

3 crs.

Prq.: LS 202

The Romantic and Realist Movements. Representative works of the novel, poetry, and drama. Conducted in Spanish.

LS 410 Latin American Novel: Early 20th Century

3 crs.

Prq.: LS 251-252 or equivalent

Early 20th century development of the novel in Latin America; will introduce Realist, Indianist, and Mexican Revolution-Novels. Major authors: Azuela, Icaza, Rivera, Alegria, Gallegos, Isaacs, Marmol, etc. Conducted in Spanish.

LS 420 The Contemporary Latin American Novel

3 crs.

Prq.: LS 251-252 or equivalent

The development of the Latin American novel, focusing on post WW II authors: Cortazar, Garcia Marquez, Vargas Llosa, Fuentes, Carpentier, etc. Conducted in Spanish.

LS 451 Twentieth Century Spanish Literature

3 crs.

Prq.: LS 202

The Spanish novel, essay, poetry, and drama from the Generation of '98 to the present. Conducted in Spanish.

LS 495 Seminar in Spanish or Spanish American Literature

3 crs.

Prq.: Consent of the Department

This seminar is limited to seniors of honor standing. It will pursue in depth selected topics and authors of the specific literature. To be offered as required to qualified students.

**LS 507 Advanced Composition and Stylistics
for Graduate Students**

3 crs.

Prq.: LS 181 or LS 281

Review of advanced grammar. Exercises in translation from English into Spanish of literary and critical materials. Free composition and training in the use of stylistic devices. Conducted in Spanish.

**LS 511, 512 Masterpieces of Spanish-
American Literature I-II**

3 crs. for each semester

Prq.: LS 281 or consent of the Instructor

An intensive study of selected works from the Conquest period, Colonial period, Modernism, and the twentieth century. Conducted in Spanish.

LS 520 Topics in Spanish-American Civilization

3 crs.

Prq.: LS 281 or consent of the Instructor

A study of Spanish-American thought and culture as expressed in its history, essay, art and literature. Conducted in Spanish.

LS 521 Topics in Spanish Civilization

3 crs.

Prq.: LS 281 or consent of the Instructor

A study of Spanish thought and culture as expressed in its history, essay, art and literature. Conducted in Spanish.

LS 525 Masterpieces of Spanish Literature I

3 crs.

Prq.: LS 281 or consent of the Instructor

An intensive study of selected works from the Middle Ages to 1700 including: *Poema de Mio Cid*, *El romancero*, *El libro de buen amor*, *La Celestina*, *El Renacimiento*, *El Siglo de Oro*. Conducted in Spanish.

LS 526 Masterpieces of Spanish Literature II

3 crs.

Prq.: LS 281 or consent of the Instructor

An intensive study of selected works of Twentieth Century authors including: Ruben Dario, Miguel de Unamuno, Pio Baroja, Juan Ramon Jimenez, Federico Garcia Lorca, Camilo Jose Cela, Ana Maria Matute, Juan Goytisolo, Antonio Buero Vallejo. Conducted in Spanish.

FL 300 Languages of the World

3 crs.

An introduction to linguistic approaches of the major languages of the world. Comparing English with other languages, the course demonstrates how any language system may work. The aim is to provide the students with an understanding of comparative linguistic structure and dynamics that will help them acquire new languages through a rational program of self-study.

**FL 310 Comparative Medieval Romance Literatures
in English Translation**

3 crs.

A study of representative medieval poetry, prose, theater of French, Spanish, and Italian literatures. Works read will include *The Song of Roland*, romances of the Arthurian cycle, *The Cid*, *The Book of Good Live*, and Italian prose and poetry before the *Divine Comedy*.

FL 311 Dante and Medieval Culture in Translation

3 crs.

Life and culture of the Middle Ages approached through a close investigation of Dante's *Divine Comedy*.

FL 498 Internship in Foreign Languages

3-15 crs.

An off-campus experience to expand the cultural and occupational potential of the student using a foreign language in a working environment.

FL 499 Directed Study in Foreign Language

1-3 crs.

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

FL 502 Research

credit to be arranged

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

FL 503 Directed Study

credit to be arranged

Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

Department of Music

Professor Kenneth Falkner, Chairperson
Associate Professors: Maxine Asselin, Dorothy Ferry,
Vincent Gannon, Ian Johnstone, Jacob Liberles
Assistant Professor: Henry Santos

UNDERGRADUATE PROGRAMS

The Music Department offers a minor in music for the liberal arts and elementary education majors, courses for the humanities elective requirement, private and class instruction in piano and voice, and performing organizations for the student who wishes to take a more active part in music.

Students must notify and receive approval from the department chairperson for acceptance into the music program. A grade of C or better is expected of all music course work in the minor, as well as membership in one performing organization.

Music Minor for Liberal Arts Students

3 credits in voice: MU 131/331, MU 130 or 230; or

3 credits in piano: MU 141/341, or MU 240;

MU 171, MU 172, MU 160;

Select from MU 320, MU 360, MU 361, MU 364, MU 367, MU 368, MU 370, to total 21 credits.

Music Minor for Elementary and Special Education Students

MU 130 or 230, MU 140 and 240, MU 160 or 360, MU 255, plus two additional courses as selected in conjunction with the music department chairperson.

GRADUATE PROGRAMS

Master of Arts in Teaching

The Department of Music offers courses at the graduate level which may be taken in the Division's Master of Arts in Teaching and CAGS programs in creative arts. A diverse and appropriate program of study in music is ensured when the student works closely with the advisor in course selection.

More detailed information regarding this program may be found under the Division of Humanities and Creative Arts, as well as in the Graduate School section of this catalogue.

The departmental offerings listed below include the following courses which may not be taken for graduate credit: any course in the 100 level, MU 230, MU 240, MU 331, MU 341, and MU 499.

COURSE OFFERINGS*

‡MU 113 Stage Band

1 cr.

Prq.: Consent of the Instructor

A performing group limited to twenty students in a laboratory experience which stresses basic musicianship, analysis of form and style, ensemble playing, and improvisation. One three-hour period weekly.

‡MU 115 Instrumental Ensemble

1 cr.

Prq.: Consent of the Instructor

A mixed group of instruments which performs music originally written for that particular combination of instruments. Ensembles formed as the occasion demands. One three-hour period weekly.

‡MU 117 Women's Glee Club

1 cr.

Open to all female students who like to sing. Performances are given during the year which include traditional and folk songs, emphasizing music written for women's choir.

‡MU 118 Chorale

1 cr.

Prq.: Consent of the Instructor

A selected group of mixed voices which performs works representative of many periods of music and presents concerts throughout the academic year, at times with other college groups on and off campus. Three periods weekly.

‡MU 119 Vocal Ensemble

1 cr.

Prq.: Consent of the Instructor

A mixed group of voices which is organized to perform a particular type of music. Ensemble formed as the occasion demands. Three periods weekly.

MU 130 Voice Class I

3 crs.

Correct posture, breathing, and control are studied as well as ways of correcting individual voice problems, repertoire, solfeggio.

MU 131 Applied Voice

1 cr.

Prq.: Consent of the Instructor

Private lessons in voice for the beginning student and those with a limited background in singing. Basic concepts in posture, breathing, diction and vocalises stressed. Solo material selected from vocal literature in English with an introduction to literature in a foreign language. One half-hour period weekly. May be repeated for credit.

MU 140 Class Piano I

3 crs.

For beginning piano students who desire a fundamental approach to the keyboard. Required of elementary education majors who have elected music as a concentration or a minor. Includes correct use of the hands at the keyboard, playing of simple scales and chords, arpeggios and simple melodies; scale construction and use of I, IV and V chords.

‡From MU 113, 115, 117, 118 and 119, and from any and all co-curricular activities in which a student might wish to participate and for which the College grants or may decide to grant credit in the future, a student may accumulate not more than one (1) credit per semester, nor more than two (2) per year, nor more than six (6) per college career.

*See page 83 for general information regarding course offerings.

MU 141 Applied Piano I **1 cr.**

Prq.: Consent of the Instructor

Private instructions for the beginning piano student and those with limited background in piano. Material selected according to the ability of the student. One half-hour period weekly. May be repeated for credit.

MU 150 Essentials of Music **3 crs.**

An integrated approach to the use of music in the elementary school which serves to enhance the student's knowledge and ability to use music in the classroom.

MU 160 Music Literature **3 crs.**

A non-technical humanities elective which explores music from the Baroque through contemporary periods with emphasis on how to listen to music intelligently. Selected works by the masters include symphonies, concertos, oratorios, operas, and smaller works which are used for study, listening and discussion.

MU 170 Basic Music **3 crs.**

A basic technical study which serves as an introduction to the study of harmony, as a foundation to advanced courses in music literature and offer the student an opportunity to discover whether or not he would like to continue with the study of music.

MU 171 Music Theory I **3 crs.**

Prq.: MU 140, MU 170, or consent of the Instructor

Beginning harmony and counterpoint: writing in small forms and chorale harmonizations, written exercises, ear training and keyboard work.

MU 172 Music Theory II **3 crs.**

A continuing technical course in the study of 18th and 19th century harmony. Seventh chords through chords of the augmented sixth. Figured bass, analysis, harmonization of melody. Principles of strict counterpoint continued.

MU 230 Voice Class II **3 crs.**

Prq.: MU 130 or permission of the Instructor

A continuation of Voice Class I dealing with further development of German lieder and performance practices.

MU 240 Class Piano II **3 crs.**

Prq.: MU 140 or consent of the Instructor

A continuation of MU 140 with advanced keyboard work and more difficult melodies and rhythmic patterns. Use of II, III and VI chords, simple modulations, and keyboard harmony.

MU 251 Choral Techniques **3 crs.**

Prq.: Consent of the Instructor

A course for education majors who have elected music as a minor and open to other students with permission of the Instructor. Investigation and study of problems in choral singing, the voice, rehearsal and conducting technique, elementary and advanced choral literature. Melodic and rhythmic dictation is included.

MU 255 Music Materials for Elementary Teachers **3 crs.**

Prq.: MU 150, 170 or consent of the Instructor

For those who wish to become more actively involved with music in the classroom. Includes singing, use of instruments, listening, reading music, and rhythmic activity.

MU 270 Sightsinging and Ear Training **3 crs.**

This course attempts to raise the level of competency in music reading through series of graded solfege and ear training exercises.

MU 320 Class Recorder

3 crs.

Prq.: Permission of the Instructor

A study, through performance, of music representing the various style periods. Ensembles are organized according to the requirements of a particular composition. Problems in developing recorder technique and music fundamentals are dealt with as they are encountered through playing the instrument.

MU 331 Applied Voice II

1 cr.

Private lessons in voice for those who have satisfied the requirements of MU 131. A continuation of vocalises, breath and tone control, solo material from the literature of German, French, and Italian composers as well as contemporary works in English. One half-hour period weekly. May be repeated for credit.

MU 341 Applied Piano II

1 cr.

Prq.: MU 141 or consent of the Instructor

For the advanced student of piano who wishes to improve his ability at the keyboard. Material selected according to the ability of the student. One half-hour period weekly. May be repeated for credit.

MU 355 Creative Activities In Elementary School Music

3 crs.

Prq.: MU 150, 170 or consent of the Instructor

Practical experience offered in free and directed rhythmic responses, use of melody, percussion and chording instruments, use of the piano, and singing activities.

MU 360 Music Literature II

3 crs.

Prq.: MU 150, 170 or consent of the Instructor

An advanced course in the development of music with a study of style, form and structure through analysis, listening, and discussion.

MU 361 Forces in Modern American Music: Jazz

3 crs.

The course will trace the development of Jazz from 1890 to the present, noting its relation to the mainstream of American Music and its influence on European composers and listeners.

MU 364 Music for the Classical and Romantic Periods

3 crs.

Prq.: MU 160 or consent of the Instructor

A study of orchestral, choral and chamber music of these two periods through readings, lecture, listening and discussion.

MU 367 Black Music of the New World

3 crs.

An introduction and guide to the history of black American musicians and a survey of other ethnic composers of the Americas. Contributions of the Afro-American style as it has enriched the European-based musical tradition of the United States primarily, and other countries in the New World.

MU 368 Folk Music of Canada

3 crs.

Open to all students and may be taken as part of the Canadian Studies minor. A non-technical elective which explores the earliest folk music of the Indians and Eskimos through the lively airs of the French and nostalgic ballads of England, Ireland and Scotland. The folk music of other ethnic groups in Canada will also be explored.

MU 370 Creating Music

3 crs.

An exploration and organization of the many sounds around us to create music. Skills in performance and knowledge of music fundamentals are utilized and continually developed. All creative endeavors are performed, discussed and evaluated in class.

MU 413 Advanced Choral Conducting

3 crs.

Prq.: MU 251 or equivalent

Investigation and application of advanced conducting techniques to better equip the student to develop a fine choral ensemble.

MU 453 Music for Early Childhood

3 crs.

Prq.: Permission of the Instructor

Designed for elementary education students, teachers and those interested in primary grades. The study of music as it relates to the developmental process of children of nursery, kindergarten and primary grades. Program planning, activities and materials which help promote musical growth in children and music skills for the teacher. Special attention is given to singing, listening and use of recorded materials.

MU 456 Introduction to Orff - Schulwerk

3 crs.

Prq.: Consent of the Instructor

Carl Orff's approach to music education for teachers and others who work with children in kindergarten through grade six. Basic principles, concepts, procedures, and skills will be explored as they relate to the Orff-Schulwerk philosophy. Activities will include chanting, singing, and the playing of recorders, percussion, and tuned barred instruments.

MU 499 Directed Study in Music

1-3 crs.

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

MU 502 Research

credit to be arranged

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this Catalogue.

MU 503 Directed Study

credit to be arranged

Designed for the graduate student who desires to study selected topics in his field. For details consult the paragraph entitled "Independent Study" in the Graduate School section of this Catalogue.

MU 511 Advanced Choral Literature

3 crs.

Prq.: MU 251 or permission of the Instructor

Study and preparation of music from varied historical style periods with primary emphasis on polychordal music, American composers and Avant Garde music.

MU 512 Contemporary Trends in Choral Literature

3 crs.

Prq.: MU 251 or permission of the Instructor

Study and preparation of the newest styles and techniques of current choral composers ranging from spoken chorus to choral dramatics.

MU 552 Seminar in Music Education Problems

3 crs.

Prq.: MU 251 or permission of the Instructor

After current problems in the music education field have been recognized and analyzed, an attempt will be made to arrive at reasonable solutions which are educationally and musically sound.

MU 553 Contemporary Trends in Music Education

3 crs.

Prq.: MU 255 or consent of the Instructor

Discussion, exploration and evaluation of new projects, ideas and philosophies in music education since 1950. Includes study of Impact, Contemporary Music Project, Yale Seminar, Julliard Repertory Project, Manhattanville Music Curriculum, trends in college curricula, the Music Laboratory as a new structure for learning, and new trends in the art of music and its application to the classroom.

Department of Music

MU 554 Research in Music Education

3 crs.

Sources, methods and types of research used in scholarly inquiry, including techniques used in planning and conducting a survey.

MU 561 Music and Communication

3 crs.

Prq.: MU 160 or equivalent

Critical approaches to music and its relation to the other arts and ideas. The course will stress student thinking about what music is and what music does.

Department of Philosophy & Religious Studies

Professor David Cheney, Chairperson

Professor: Milton Boyle

Associate Professors: Edward James, Achille Joyal,
Steven Sanders

Philosophical inquiry aims at clear, logical, critical thinking about a variety of perennial human concerns. These include questions about values, the nature of knowledge and truth, the meaning of life, the understanding of experience, the possibility of religious knowledge, and many others. The Department offers courses in the main problems of philosophy, the history of philosophy, and the methods of philosophy as a mode of critical thinking.

UNDERGRADUATE PROGRAMS

Bachelor of Arts

The department offers a major program in philosophy which involves study of the history of philosophy and the main problems of ethics, epistemology—metaphysics, logic and language and other elective areas.

Philosophy Major

A minimum of ten philosophy courses (30 credits), with at least eight courses (24 credits) at the 300 or 400 level. A grade of "C" or higher is required in all philosophy course work contributing to the major. Philosophy majors intending to go to graduate school should develop proficiency in either French or German.

Satisfactory completion of at least one course in each of the following areas is required of all philosophy majors:

PL 200 or PL 324; PL 210 or PL 321; PL 310 or PL 405; PL 450.

Philosophy Minor

For a minor in philosophy, a student must complete six philosophy courses (18 credits). Interested students should contact the chairperson in order to discuss an individual program relevant to the academic major.

Religious Studies Minor

The interdisciplinary nature of the study will be exploited by the coordination of courses offered by several departments of the college. Flexibility is desired and each student is encouraged to design his own program subject to his minor advisor's approval. For a minor, students must complete six courses (18 credits) in religious studies, including **RE 100 Introduction to Religious Studies** and a course in at least three of the four areas listed below. One of these courses is to be in the study of non-Western religion.

- I History of Religion/Comparative Religion: RE 201 Comparative Religion: Western, RE 202 Comparative Religion: Eastern, RE 251 Religion in Contemporary America, AN 207 Primitive Religion.
- II Religious Literature: RE 221 Introduction to the Old Testament, RE 222 Introduction to the New Testament, EN 497 Seminar (Topics to be specified).
- III Religion and Philosophy: PL 450 Philosophy Seminar (Topics to be specified), PL 351 Religion, Faith and Reason.
- IV Scientific Study of Religion: AN 207 Primitive Religion, SO 308 Sociology of Religion, SO 321 Religion and Society in Asia.

GRADUATE PROGRAMS

The department does not offer a program in philosophy or religious studies at the master's degree level, but does participate in programs leading to the degrees of Master of Arts in Humanities and Master of Arts in Teaching with a concentration in humanities. Philosophy and religious studies courses, if approved by the faculty advisor, may be taken in partial fulfillment of master's degree requirements. More detailed information regarding these programs may be found under the Division of Humanities and Creative Arts, as well as in the Graduate School section of this catalogue.

The departmental offerings listed below include the following courses which may not be taken for graduate credit: all philosophy courses numbered at the 200 level, PL 301, PL 302, PL 310, PL 321, PL 324, PL 499, RE 100, and RE 499.

COURSE OFFERINGS*

PHILOSOPHY

Philosophy courses at the 200-level have no prerequisite. All other philosophy courses have a common prerequisite of one three credit course in philosophy, except for PL 450, PL 499, PL 502 and PL 503 which require consent of the instructor and/or department.

PL 200 Scepticism, Knowledge and Reality 3 crs.

An introduction to philosophy through an investigation of the relationship between the knower and the known, including such questions as: Why is there something rather than nothing? What, if anything, can I know? Of what, if anything, can I be certain? Does man discover or invent truth? Can I trust my senses to tell me about the world? Do my thoughts accurately represent things the way they actually exist? Do things exist when they are not being perceived? Are there proofs for believing that God exists? Do the above questions make any practical difference in my life?

PL 210 Human Conduct and Values 3 crs.

An introduction to philosophy through a discussion of questions about morality, including: What is morality? Does everyone have his or her own morality, or is there something universal about morality? Is religion a sound basis for morality? Should the law be used to enforce morality? What are the most rational ways to resolve moral disagreements? Attention will be given to the application of the methods of sound reasoning to contemporary moral controversies.

PL 220 Philosophies of Human Nature 3 crs.

An introduction to philosophy through an investigation of various theories of human nature—e.g. Christian, Marxist, behaviorist, materialist, existentialist, Platonist—and such questions as: What is a person? Who or what am I? Are human acts free or determined? Is it reasonable to believe in life after death? Are conscious experiences identical to brain processes?

PL 230 Philosophy and Political Affairs 3 crs.

An introduction to philosophy through an examination of the problems of social and political philosophy, including: What is the purpose of government? What is the best form of government? On what basis should we evaluate government policies and actions? Toward what ideals should a society aspire? To what extent, if any, are we obligated to obey the law? To what extent should the state have authority over an individual's life—e.g., in the case of abortion, punishment, censorship, sexuality, euthanasia? What are rights and how do we get them? On what basis should society distribute its benefits and burdens?

PL 240 Rational Thinking 3 crs.

An introduction to philosophy through an examination of questions about rationality, including: What is a rational argument? What are the clearest and most effective methods of thinking? Are reason and emotion opposed? When is decision rational? Why be rational? Is science rational? Includes an introduction to elementary ideas of logic.

*See page 83 for general information regarding course offerings.

PL 250 Philosophy, Science and the Modern World 3 crs.

An introduction to philosophy through an examination of the attitudes of modern science and their impact on other fields, including such questions as: What distinguishes the spirit of modern science from that of the middle ages? Are science and art two separate cultures? Do science and religion conflict? What are the political implications of scientific attitudes? Does science eliminate values from the world? Was the romantic reaction to science justified? Primarily for science majors.

PL 301 Great Philosophers: Ancient to Renaissance 3 crs.

A study of selected works of major philosophers and schools of thought from the Pre-Socratics through the Renaissance, e.g., Plato, Aristotle, Plotinus, Augustine, Aquinas, Pico della Mirandola, Machiavelli, Erasmus, Bacon.

PL 302 Great Philosophers: Post-Renaissance to Modern 3 crs.

A study of selected works of major philosophers and schools of thought from the post-Renaissance period through modern times, e.g., Hobbes, Descartes, Spinoza, Locke, Hume, Berkeley, Leibniz, Kant, Hegel, Schopenhauer, Kierkegaard, Nietzsche, Mill, and Marx.

PL 310 Logic 3 crs.

What is logic? Can it be used to appraise the arguments we meet in ordinary life?—and if so, how? How is logic related, if at all, to mathematics?—to language?—to the world? Are there alternative logics? Or is there just one logic underlying all of our thinking?

PL 321 Contemporary Moral Philosophy 3 crs.

A study of the leading problems of contemporary moral philosophy, including: What is the moral point of view? Does morality conflict with self-interest? Is it rational to be moral? Can we justify our most fundamental moral principles? Is there an objective way to choose between alternative moralities of life-styles? Why should we be moral?

PL 322 Philosophy of Law 3 crs.

An examination of the problems of legal reasoning, the nature of justice, and the main theories of law—legal realism, legal positivism, natural law—and these issues: Should the law interfere with the liberty of individuals to do as they please? If so, for what purposes? How should the legal system regard those who violate the law as a matter of conscience? Does law create or acknowledge rights? How is legal responsibility determined? Is punishment rationally defensible?

PL 323 Theories of Happiness 3 crs.

Examination of theories of the nature of happiness. What is happiness? How can happiness be attained? Are the emotions a reliable guide to happiness? To what extent does being rational contribute to happiness? Discussion will include one or more of the following philosophers and schools of thought: Plato, Aristotle, Stoicism, Epicureanism, Judaism, Christianity, Spinoza, Mill, Dostoevsky, Schopenhauer, Nietzsche, Freud.

PL 324 Problems of Experience, Knowledge, and Perception 3 crs.

A study of problems in the philosophy of knowledge, including: Does the evidence for psychic phenomena establish the existence of spirits? Can we have knowledge of the mental states of others? Is there a rational basis for claims to know the future? Is perception a form of knowledge?

PL 326 Theories of Mind 3 crs.

A discussion of the central problems concerned with the nature of mind and consciousness, including: What is consciousness? Is consciousness identical to brain states? Are mind and body distinct entities? Can we ever know the thoughts and feelings of another person? Can thoughts influence physical events? Can machines think? Could we construct a robot with human feelings?—and if so, would it have rights and obligations?

PL 328 American Philosophy

3 crs.

A study of the major periods and thinkers of American thought--e.g., Puritanism and Jonathan Edwards, Enlightenment and Thomas Jefferson, Transcendentalism and Ralph Waldo Emerson, Naturalism and John Dewey, Pragmatism and William James, Idealism and Josiah Royce, Realism and Charles Sanders Peirce--as well as the ideas of contemporary thinkers.

PL 401 Philosophy of Natural Science

3 crs.

An inquiry into philosophical issues relating to the natural sciences, including: Does science progress or merely change from one dominant position to another? Does science foster the critical spirit or instead encourage uncritical acceptance or established theories? Are there any general standards for evaluating scientific laws and explanations? Does science have a method? And if so, does its method make it superior to literature and the "humanities"? Are terms like "electron," "gene," and "DNA molecule" merely tools for prediction or do they refer to actual entities? Can we distinguish science from astrology, superstition, numerology?

PL 403 Philosophy and the Arts

3 crs.

Inquiry into recurrent philosophical themes in literature and the fine arts, accompanied by an introduction to the fundamental problems of esthetics.

PL 405 Philosophy of Language

3 crs.

Discussion of philosophical questions concerning language, thought, and reality, including: Is thought possible without language? Does a person's language determine the way in which he understands reality? Do different cultures define their own standards of rationality and truth? Are there innate ideas or structures? Do one's inner emotional states and feelings constitute a private language? What is the difference between saying something and meaning it and saying it without meaning it? What is understanding?

PL 407 Philosophy of Social Science

3 crs.

What is the relation between the social and physical sciences? Should the social sciences seek to be like the physical sciences? Can society and personality be studied scientifically? Can or should the social sciences seek to avoid value claims? Are there any differences among the social sciences concerning the above questions? In discussion of these questions, Marxist, positivist, existentialist, and historicist views on and in the social sciences will be examined.

PL 410 Existentialism

3 crs.

A critical study of the concepts of human existence, anxiety, freedom, decision; introduction to phenomenology; readings from Kierkegaard, Heidegger, Jaspers, Sartre, Camus.

PL 450 Philosophy Seminar

3 crs.

Prq.: Consent of the Instructor

Study of a particular philosopher and/or selected philosophical problems. Topics vary; course may be repeated.

PL 499 Directed Study in Philosophy

1-3 crs.

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

PL 502 Research

credit to be arranged

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

PL 503 Directed Study

credit to be arranged

Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

The following Interdisciplinary courses cover subjects which are of common concern to the fields of Philosophy and Religious Studies. They may be elected in partial fulfillment of requirements for the major in Philosophy and the minor in Religious Studies.

PR 350 The Meaning of Life

3 crs.

Discussion of questions that arise in our attempts to understand the meaning of life, including: Does life have a meaning? Does death deprive life of meaning? Does religion constitute the best, or final, answer to questions of the meaning of life? Is the meaning of life the same for everyone or does each individual give his own life meaning? Can we conclusively answer, or even rationally discuss, questions about the meaning of life? Includes an examination of religious, humanistic, and existentialist theories in the meaning of life.

PR 351 Religion, Faith and Reason

3 crs.

A critical examination of the nature and justification of religious claims, including discussion of: What are the grounds for belief or disbelief in God's existence? Is religious discourse meaningful? Do faith and reason conflict? Is belief in immortality intelligible and/or defensible? Is religious knowledge possible? Are revelation and religious experience reliable sources of truth? Is it rational to believe in miracles? Is atheism a religion?

PR 352 Eastern Philosophies: Yoga, Hinduism, Buddhism, and Jainism

3 crs.

Do these religious philosophies, with their origin in India, differ in method or in content from Western philosophies? If so, do they have anything to teach Western Philosophy? What is the aim of meditation, if anything? Do all peoples share a single end — which is the escape from an illusory world? Are all people really one, reflecting or being an underlying One Reality? Should we speak of being a person rather than becoming one? In pursuing answers to these questions, it will be necessary to ask whether it is possible for one culture to understand another, whether there are standards of evidence and rationality which all cultures share and which allow various cultures to appraise each other.

RELIGIOUS STUDIES

RE 100 Introduction to Religious Studies

3 crs.

Definition of "religion" in terms of man's religious belief, experience, and expression. The significance of religion in the life and culture of man, including the liberating and restricting forces of religious belief. Emphasis on the contemporary situation with examples from earlier cultures.

RE 201 Comparative Religion: Western

3 crs.

An examination of the origins, development, and basic tenets of the major world religions from earliest times to the Moslem era, with particular emphasis on ancient Near East religions: Judaism, Christianity, and Islam.

RE 202 Comparative Religion: Eastern

3 crs.

An examination of the origins, development and basic tenets of major Eastern religions, including Hinduism, Buddhism, Taoism, Shintoism, and Confucianism.

RE 221 Introduction to the Old Testament

3 crs.

Historical and cultural background; literature and interpretation of the Old Testament.

RE 222 Introduction to the New Testament

3 crs.

Historical and cultural background; literature and interpretation of the New Testament.

RE 251 Religion in Contemporary America

3 crs.

A consideration of the organization, practices and beliefs of current American religious organizations set in their historical and cultural perspectives. Roman Catholic, Eastern Orthodox, Jewish and Protestant denominations will be included in the study. The role of the church in the modern American community will be assessed and recent trends within and without the church will be discussed. The study will include such theological topics as Honest-to-God, God is Dead, The Theology of Hope, The Secular City and the so-called Jesus movement.

RE 310 Religion and Science

3 crs.

Prq.: One course in either Philosophy or Religious Studies and one year of natural science
A study of the relationships between Religion and the Sciences. Beginning with historical perspectives, the course will compare methods, language and issues.

RE 315 Topics In Religious Studies

3 crs.

Prq.: Consent of the Instructor

A one-semester course in which a special topic in the area of religious studies will be offered.

RE 499 Directed Study In Religious Studies

1-3 crs.

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

RE 502 Research

credit to be arranged

Prq.: Approval of the Advisor

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

RE 503 Directed Study

credit to be arranged

Prq.: Approval of the Advisor

Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

Department of Speech Communication Theatre Arts, and Communication Disorders

Assistant Professor Lee A. Dunne, Chairperson
Professor: Richard J. Warye
Associate Professors: Robert Barnett, Stephen Levine
Assistant Professors: Sandra Brenckle, Joel Litvin,
Cora Miller, Susan Miskelly,
Nancy Street, Joanne Wuschke

UNDERGRADUATE PROGRAMS

Bachelor of Arts

Students majoring in this Department may choose from one of three related concentrations for study or career preparation: Speech Communication, Theatre Arts, or Communication Disorders.

Students enrolled in the Department must pass a Speech Proficiency Test before the end of their first year in the department.

In cooperation with the Department of Media and Librarianship, a minor in Radio and Television Operation and Production is available. For detailed information on this minor, see the catalogue section *Undergraduate Multidisciplinary and Pre-Professional Programs*.

In cooperation with the English Department and other disciplines a minor in Linguistics is available. For detailed information on the Linguistics minor see the catalogue section Undergraduate Multidisciplinary and Pre-Professional Programs.

Speech Communication Concentration

Students selecting this concentration pursue a course of applied and theoretical studies in interpersonal relationships, small group communication, organizational communication, public speaking, and debate. The minimum requirements include:

CC 200, CC 210, CC 250, CC 260 or CC 360, CC 450, CC 495, plus two additional courses.

Speech Communication Minor

CC 200, CC 210, plus twelve additional credits selected from Communication courses.

Communication Disorders Concentration

The concentration in Communication Disorders is a pre-professional program providing the necessary course work to continue in speech pathology, audiology or related fields at the graduate level. Courses in the specialization can be credited toward American Speech and Hearing Association Certification.

Through course work available in the department, a student is able to satisfy the Massachusetts state requirements for certification for a teacher of Children with Speech, Language or Hearing Disorders.

The minimum requirements include:

CC 200, CC 210, CD 281, CD 291, CD 292, CD 320, CD 440, plus additional courses selected in conjunction with a faculty advisor.

If state certification is sought, a student must consult with the department as the requirements will be changing as of September 1982.

Theatre Concentration

Students selecting this concentration follow a program designed to develop an appreciation of those subjects related to performance and production in live theatre. The minimum requirements include:

CC 200, CC 210, CT 250, CT 380, CT 390, CT 395,
CT 431, CT 432, plus four credits in CT 130 and/or CT 131.
CT 310 if minoring in Secondary Education.

Theatre Minor

CC 200, CC 210, CT 250, two credits in CT 130 and/or CT 131, plus nine additional credits selected from Theatre courses.

Minor in High School Education

The requirements for teacher certification in Massachusetts have changed. Students graduating after August 1981 should consult with the department chairperson concerning changes in program requirements. Programs leading to initial certification will include a full semester of student teaching. Graduate programs leading to an additional certificate will require the equivalent of a half-semester practicum. Specific course requirements for teacher of Speech, grades 9-12, and teacher of Drama, grades 5-12, are listed under the Department of High School, Middle School and Adult Education.

Co-Curricular Programs

The Department of Speech Communication, Theatre Arts, and Communication Disorders has an active children's theatre program which provides two productions a year for school age children. Four student clubs are actively engaged in co-curricular activities supportive of the academic programs in the Department.

The Ensemble Theatre, in cooperation with the theatre staff, produces three major theatrical productions a year and supervises studio productions which are directed by students.

The Forensic Society participates in intercollegiate competition in debate, group discussion, and individual speech competition in over fifteen separate categories including persuasive, informative, humorous speaking and oral interpretation of literature. Membership is open to all students with or without previous experience.

The Bridgewater Chapter of the National Student Speech and Hearing Association is open to all students in the College Community with an interest in communication disorders. The group sponsors career counseling as well as professionally related workshops during the academic year.

The Creative Dance Group is open to all who like to dance and participate in the performance of original works.

Co-Curricular Credits

Students may also receive credits in the department for active participation in debate, forensics, choral speaking, or theatre (see CC 110, CT 120, CT 130 and CT 131).

GRADUATE PROGRAMS

Master of Arts In Speech Communication

The Department offers a program leading to the degree of Master of Arts in Speech Communication, which is designed primarily to prepare students for research, further graduate study, and professional development in such fields as administration, management, and human services. An undergraduate major in one of the disciplines within the scope of the Liberal Arts and Sciences is normally required for admission to this program. However, those who have training in other areas may request an interview with the Chairperson of the Department of Speech Communication, Theatre Arts, and Communication Disorders.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described in the Graduate School section of this catalogue. Degree requirements include six credits of department requirements (CC 505 and CC 506), a minimum of eighteen credits of department electives which are appropriate to the degree and have been approved by the student's advisor, and a six credit thesis program. A minimum of thirty approved graduate credits is required for graduation. Additional information regarding the M.A. degree is provided in the Graduate School section of this catalogue.

Master of Arts in Teaching (Speech Communication and Theatre)

The Department offers a program leading to the degree of Master of Arts in Teaching. This program is designed primarily to meet the varied needs of graduate students who are currently teaching or intend to teach

communication and theatre. A diverse and appropriate program of study is ensured when the student works closely with the advisor in course selection. All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue.

Speech Communication and Theatre Arts courses may also be taken in the Division's Master of Arts in Teaching and CAGS programs in Creative Arts. More detailed information regarding these programs may be found under the Division of Humanities and Creative Arts as well as in the Graduate School section of this catalogue.

The following two undergraduate level courses are prerequisites for the graduate course work offered by the department: CC 200 Dynamics of Human Communication and CT 250 Play Production. Additional undergraduate prerequisites in other departments may be required.

The departmental offerings listed below include the following courses which may not be taken for graduate credit: CC courses below the 300 level, CC 499, CD courses below the 300 level, CD 497, CD 499, CT courses below the 300 level, CT 498, and CT 499.

COURSE OFFERINGS*

SPEECH COMMUNICATION

‡CC 110 Forensics Practicum

1 cr.

Credit is given for sixty or more hours of intercollegiate debate and forensics.

CC 200 Dynamics of Human Communication

3 crs.

Designed to develop and improve basic skills necessary for successful interaction in everyday and professional settings. Skills practiced generally include listening, interviewing, speaking and basic problem solving discussion.

CC 210 Voice and Diction

3 crs.

Analysis of each student's habits of respiration, phonation, and articulation; exercises designed to correct poor habits. Physics and physiology of the vocal mechanism. Training in perception, differentiation, and production of the standard sounds of good American speech.

CC 215 Speech for Radio and Television

3 crs.

Prq.: CC 210 or consent of the Instructor

Study and practice of styles and techniques for broadcasting.

CC 250 Public Speaking

3 crs.

Study, evaluation and analysis of speech preparation with frequent practice of various speech types.

CC 255 Business and Professional Speaking

3 crs.

Business and professional speaking: provides an opportunity to explore career choices, improves ability to present self in organizational contexts, and increases levels of competence needed to transmit information, attain cooperation and exert influence in corporate and public sector work environments.

CC 260 Group Communication and Decision-Making

3 crs.

Principles of human interaction in small groups with stress on participation, leadership, reasoning, and problem solving.

CC 300 Developing Creativity

3 crs.

The purpose of this course is to increase the degree to which students recognize and nurture their creative potential, especially in sensing and meeting problems and challenges in all aspects of their academic and personal lives.

CC 351 Rhetoric and Persuasion

3 crs.

Prq.: CC 250

Study of the theory of persuasive speaking with frequent practice.

CC 360 Argumentation and Debate

3 crs.

Study and practice of analysis, research, and refutation of debate cases using a variety of formats.

CC 363 Interpreting Communicative Behavior

3 crs.

The description and analysis of interpersonal interaction and human relationships as they occur in everyday settings from a non-psychological perspective.

‡Note: From the one-credit co-curricular activities, CC 110, CT 120, CT 130, and CT 131, and from any and all co-curricular activities for which the College grants credit, a student may accumulate not more than one credit per semester (two per year) nor more than six per four year degree program.

*See page 83 for general information regarding course offerings.

CC 365 Introduction to Intercultural Communication 3 crs.

Introduction to Intercultural Communication is a course designed to acquaint students with the factors which affect interpersonal relationships among people of differing cultural backgrounds. Foreign as well as native-born persons are encouraged to take the course. Course objectives are to enable students to become more sensitive to and tolerant of values and ideas expressed by others.

CC 399 Topical Studies 3 crs.

Variable contemporary topics in communication.

CC 400 Creative Techniques for Teaching 3 crs.

Story telling, creative dramatics, role playing, puppets, and masks, and other speech arts, and their practical application in teaching various subjects.

CC 450 Communicative Theory 3 crs.

An introduction to the nature and role of theories in understanding human communication and an exploration of various current communication theories and perspectives. Special attention will be paid to the practical and social consequences of accepting any theory. Not open to Freshmen except by special permission of the Department.

CC 452 Organizational Communication 3 crs.

Analysis of communication problems in modern complex organizations, theory and practice.

CC 480 Introduction to Television 3 crs.

Television as a medium of communication in society and in the school. Study of the historical development of broadcasting and the current status of the medium. Active participation in developing skills of performance for users as an educator, civic leader, or professional broadcaster.

CC 486 Mass Communication in Society 3 crs.

A basic introduction to research and theory in mass communication by focusing on major social questions regarding the mass media and examining empirical research relevant to these questions.

CC 495 Seminar in Communication 3 crs.

Study and application of research methods in the area of Communication Arts & Sciences, with particular emphasis on the individual student's interests in the discipline.

CC 498 Internship in Communication 3-15 crs.

Prq.: Consent of Department Chairperson

A non-classroom experience designed for a limited number of junior and senior majors to complement their academic preparation.

CC 499 Directed Study in Communication 1-3 crs.

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

CC 502 Research credit to be arranged

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this Catalogue.

CC 503 Directed Study credit to be arranged

Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this Catalogue.

CC 504 Communication Skills Overview

3 crs.

Prq.: CC 200 or equivalent

This course is designed to provide students an opportunity to review their basic communication skills at all major levels and, with the assistance of the instructor, to diagnose particular areas of strength and weakness to be reinforced or improved in subsequent graduate courses.

CC 505 Communication Theories Overview

3 crs.

Prq.: CC 450 or equivalent

This course is designed to provide students with information concerning current developments in the field of communication theory and a basis for the generation of thesis research problems. Theoretical formulations in the areas of general semantics, rhetoric, interpersonal communication, intercultural communication, group dynamics and persuasion will be included.

CC 506 Communication Research Methods Overview

3 crs.

Prq.: CC 495 or equivalent

This course is designed to provide students with the tools necessary to create meaningful and competent thesis, research, and project plans. Quantitative and nonquantitative research are covered, as well as project creation.

CC 507 Speech Communication Education: Teaching Human Communication Courses in the College and University

3 crs.

This course provides an analysis of current objectives, problems, and methods of teaching communication at the college level. Selection and preparation of teaching materials will be discussed. Evaluation techniques will be introduced and critiqued. Methods of relating speech to other subject areas will be explored.

CC 511 Laboratory In Interpersonal Communication

3 crs.

This course provides an extensive examination, diagnosis and treatment of interpersonal communicative behavior of the individual. Emphasis is on the development and enrichment of interpersonal communicative skill and on theoretical perspectives for analyzing the structure of interpersonal communication. Interpersonal communication structures to be studied include communication as ritual, role, game, personal strategy and a striving for intimacy.

CC 512 Public Communication

3 crs.

An introduction to the methods of rhetorical research and historical critical inquiry as applied to the study of movements, issues, and speeches.

CC 513 Laboratory in Small Group Communication

3 crs.

Extensive and intensive experience in small group communication focusing on group participation and leadership. Emphasis will be placed on the transmission, analysis, and processing of messages, and on the roles and functions of group membership.

CC 514 Coaching and Directing Forensics

3 crs.

A study of the philosophies, problems, and techniques associated with forensic activities; recent trends and practices in co-curricular programs; critical evaluation of related research.

CC 515 Male/Female Communication

3 crs.

A study of the gender variable in communication in four areas: 1) intrapersonal communication--socialization and self concept; 2) interpersonal relations between the sexes; 3) communication in structured groups; and 4) public communication--male and female orators.

CC 516 Seminar in Intercultural Communication

3 crs.

Analysis and comparison of communicative styles in different cultures. Investigation of differences in messages, communicative forms, target persons, defensive styles, and interpersonal processes of establishing, developing, and terminating relationships.

CC 520 Group Leadership

3 crs.

This course focuses on responsibilities, theories, and practices associated with group leadership.

CC 525 Seminar in Mass Communication 3 crs.

Prq.: CC 486 or equivalent

Examination of the audience of mass communication in terms of the uses and gratifications theories.

CC 530 Problems in Organizational Communication: 3 crs.
Diagnosis and Treatment

Prq.: CC 452 or equivalent

Analysis and treatment of specific common problems and communication breakdown and information overload in organizational structures.

CC 535 Seminar in Communication Theory 3 crs.

This course explores major communicative theories in depth.

COMMUNICATION DISORDERS

CD 281 Speech Anatomy and Physiology 3 crs.

Introduction to the study of the anatomy and physiology of systems involved in speech, language, and hearing, and their relationships to disorders of communication.

CD 291 Phonetics 3 crs.

Analysis and transcription of speech sound systems.

CD 292 Language Acquisition and Development 3 crs.

Interrelationships among linguistic neurophysiological, physical, intellectual, social, and cultural factors as they effect language acquisition in the child. Analysis of language development will be undertaken by students.

CD 320 Communication Disorders 3 crs.

Prq.: CD 292 or consent of the Instructor

Introduction to communication disorders in children and adults. Symptomatology, etiology and intervention techniques are considered.

CD 325 Voice Disorders in Children and Adults 3 crs.

Prq.: CD 281, CD 291

An introduction to etiology, diagnosis, and remediation of voice disorders and associated pathological conditions.

CD 330 Speech and Hearing Science 3 crs.

An introductory course as it related to normal aspects of speech, hearing, and language. Physiological elements of speech production, speech acoustics, auditory physiology and the psychophysics of sound reception.

CD 392 Language Disorders in Children 3 crs.

Prq.: CD 292

Etiology, diagnosis, evaluation and treatment of language impaired children. Clinical case material will be discussed and analyzed. Both habilitative and rehabilitative procedures will be covered.

CD 399 Topical Studies 3 crs.

Variable contemporary topics in communication disorders.

CD 440 Audiology

3 crs.

Prq.: CD 281

Science of hearing; transmission and measurement of sound to the human ear; anatomy, physiology, and neurology of hearing mechanism. Related pathological conditions will be discussed.

CD 442 Dactylology

3 crs.

History and development of manual communication. Integration of signing and finger spelling into a total communication system. Other systems of nonverbal communication will be discussed.

CD 456 Diagnosis and Evaluation of Communication Disorders

3 crs.

Prq.: CD 281, CD 291, CD 292, CD 320, or consent of Instructor

Objective of course is to give pre-practicum student understanding and skills in assessment and diagnosis of speech and language disorders in children and adults.

CD 457 Introduction to Stuttering Theory and Therapy

3 crs.

Prq.: CD 320

A survey of stuttering theories and descriptive and intervention techniques.

CD 458 Aphasia in Adults

3 crs.

Prq.: CD 320

Consideration of neuroanatomy, etiologies, characteristic language and speech disorders, psychological correlates, classification systems, and diagnostic and rehabilitation procedures.

CD 493 Speech Reading and Auditory Training

3 crs.

Prq.: CD 440

Habilitation and rehabilitation procedures for the deaf and hard of hearing with emphasis on auditory training, speech reading, and speech conversation.

CD 496 Intervention Strategies in Communication Disorders

3 crs.

Prq.: CD 292, CD 291, CD 281, CD 320

Intervention strategies for children and adults having speech, language, voice, rhythm, hearing and associated problems that interfere with communication.

CD 497 Clinical Practicum: Communication Disorders

6 crs.

Prq.: 2.5 Cum in the Major and Consent of the Department

Clinical experience in speech pathology or audiology. Clinical hours obtained can be credited toward required A.S.H.A. hours. Placements are varied and include hospital clinics, community health agencies and public schools. Application must be made by March 15 of the junior year.

CD 498 Internship in Communication Disorders

3-15 crs.

Prq.: Consent of Department Chairperson

A non-classroom experience designed for a limited number of junior and senior majors to complement their academic preparation.

CD 499 Directed Study in Communication Disorders

1-3 crs.

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

THEATRE ARTS

A student majoring in Theatre Arts will be required to complete 4 semester hours of Practicum (CT 130 and CT 131) of which a minimum of 2 semester hours must be in CT 131.

‡CT 120 Choral Speaking Practicum **1 cr.**
Credit is given for sixty (60) or more hours of participation.

‡CT 130 Theatre Performance Practicum **1 cr.**
Credit is given for sixty (60) or more hours per semester of rehearsal and performance time in a major production.

CT 131 Technical Theatre Practicum **1 cr.**
Credit is given for 60 or more hours per semester of technical work on a major production. (Two of the required 4 credit hours must be earned in CT 131).

CT/PE 225 Creative Dance I* **3 crs.**
The study of dance, as the Art of Movement. Included are basic exercise, individual and group dance based on polarities of force, impulse, time, space, vocal and instrumental sound.

CT 250 Play Production **3 crs.**
Reading, selection, analysis, and preparation of scripts for presentation. Theory and practice.

CT 270 Community Theatre **3 crs.**
Trends, organization, and practices of local and regional theatrical groups.

CT 271 Stage Make-up **1 cr.**
Study and practice in the art of straight and character make-up for stage, television, and film. Two contact hours per week twice weekly.

CT 272 Stage Costuming **1 cr.**
A study of period fashions and principles of costume design. Two contact hours per week twice weekly. Offered in alternate years.

CT 290 Movement and Dance for Actors **3 crs.**
The exploration of Force, the dramatic element of movement in Dance and Drama, Dance in relation to the spatial environment, lighting, vocal and instrumental sound, costuming and masks.

CT 310 Oral Interpretation **3 crs.**
Prq.: CC 210
Oral reading of selected prose, poetry and drama: individual and group forms. Theory and practice.

CT 320 Creative Dance for Children **3 crs.**
Prq.: One three credit dance course or consent of the Instructor
The study and experience of Dance as a creative art activity for children. For those planning to work with children in schools, camps, community centers, or enrichment programs.

‡Note: From the one-credit co-curricular activities, CC 110, CT 120, CT 130, and CT 131, and from any and all co-curricular activities for which the College grants credit, a student may accumulate not more than one credit per semester (two per year) nor more than six per four year degree program.

*Offered for credit for both the Speech Communication, Theatre Arts and Communication Disorders and the Health, Physical Education and Recreation Departments.

CT/PE 325 Creative Dance II * **3 crs.**

Prq.: One 3 credit dance course or consent of the Instructor

Study of impulse, design, metric patterns, dynamic qualities of dance, accompaniment and elements of performance through improvisation and composition. Emphasis will be on increased artistry in the development and presentation of individual and group dances.

CT 330 Creative Dramatics **3 crs.**

Development of the child's creative faculties through the use of dramatic play in laboratory sessions as well as classroom activity.

CT 336 The American Musical Theatre **3 crs.**

Major trends in the evolution of the American Musical Theatre from the minstrel show to the contemporary Broadway musical. Examination of major works of leading composers, librettists, performers, producers, and choreographers.

CT/PE 350 Movement in the Creative Arts* **3 crs.**

Dance, the art of movement, in its relationship to drama, music, speech, and the visual arts. Creative experiences in each of these areas directed by divisional staff.

CT/PE 352 Dance History* **3 crs.**

Examination of dance from an historical perspective: movement, themes, composition, and accompaniment as expressive of specific cultures with emphasis on the western world. Recreation of individual and group dances from selected historical periods.

CT 373 Theatre Management **3 crs.**

Prq.: CT 250

Study of the commercial aspects of theatrical production: publicity, programs, financing, ticket sales and house management.

CT 375 Scene Design **3 crs.**

Prq.: CT 250

Theory and practice of designing for stage productions.

CT 380 Stagecraft **3 crs.**

Prq.: CT 250

Theory and practice of technical theatre with emphasis on planning the production. Study and practice in stage management, set construction, costuming, properties, make-up, and sound.

CT 385 Stage Lighting **3 crs.**

Materials and techniques fundamental to historical and contemporary stage lighting; analysis of the principles of design as they relate to contemporary theatre execution.

CT 390 Principles of Acting **3 crs.**

Prq.: CT 250

Development of appreciation and basic skills in the fundamentals of acting. Exercises, improvisations, and scenes.

CT 391 Advanced Acting **3 crs.**

Prq.: CT 250, CT 390 or consent of the Instructor

Advanced problems and projects; intensive scene analysis and introduction to styles of acting.

*Offered for credit for both the Speech Communication, Theatre Arts, and Communication Disorders and the Health, Physical Education and Recreation Departments.

CT 392 Improvisational Acting 3 crs.

Development of the student's capabilities in interpreting his awareness of life through concentration, imagination, and observation.

CT 395 Principles of Directing 3 crs.

Prq.: CT 250, CT 390 or consent of the Instructor

Basic knowledge and techniques for the beginning director. Play analysis, composition, movement, characterization and rehearsal.

CT 399 Topical Studies 3 crs.

Variable contemporary topics in theatre.

CT 410 Modern Styles of Theatrical Production 3 crs.

Prq.: CT 250, CT 390, or consent of the Instructor

Analysis and practice of staging methods and styles of selected modern movements which are considered classic in the development of theatre, such as styles appropriate to the works of Brecht, Strindberg, Beckett, and Ionesco.

CT 415 Comedy on Stage 3 crs.

Prq.: CT 250, CT 390, or consent of Instructor

Analysis and practice of theatrical comedy, including techniques appropriate to the interpretation and presentation of humorous dramatic scenes in the classroom

CT 420 Children's Theatre 3 crs.

Prq.: CT 250

Theatre for the child audience. Theories applied by assuming responsibility for the production of a play for children on campus and in area schools.

CT 431 Theatre History I 3 crs.

Trends in dramatic and theatrical developments throughout the western world from Ancient Greece to the 17th century. Not open to Freshmen except by special permission of the Department.

CT 432 Theatre History II 3 crs.

Trends in dramatic and theatrical developments throughout the western world from the 17th century to the present. Not open to Freshmen except by special permission of the Department.

CT 435 Period Styles of Theatrical Productions 3 crs.

Prq.: CT 390 or CT 395 or consent of the Instructor

Analysis and practice of the staging methods and styles of selected historical periods which are considered classic in the evaluation of theatre, such as styles appropriate to the works of Sophocles, Plautus, Shakespeare, and Moliere.

CT 470 Playwriting 3 crs.

Appreciation of the nature of the play as an art form. Analysis of plays of various types; practice in writing.

CT 498 Internship in Theatre 3-15 crs.

Prq.: Consent of Department Chairperson

A non-classroom experience designed for a limited number of junior and senior majors to complement their academic preparation.

CT 499 Directed Study in Theatre 1-3 crs.

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

CT 502 Research

credit to be arranged

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this Catalogue.

CT 503 Directed Study

credit to be arranged

Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this Catalogue.

Division of Natural Sciences & Mathematics

**Biological Sciences,
Chemical Sciences,
Earth Sciences & Geography,
Mathematics &
Computer Science,
Physics**

Divisional Head: Dr. Kenneth J. Howe

UNDERGRADUATE PROGRAMS

The departments of the Division of Natural Sciences and Mathematics offer undergraduate majors in aviation science, biology, chemistry, chemistry/geology, earth sciences, geography, management science, mathematics, computer science, and physics.

Undergraduate minors have been developed in biology, chemistry, computer science, data processing, earth sciences, geography, mathematics, physical science, physics, and urban affairs. There are also pre-dental, pre-medical, pre-veterinary, oceanography, and scientific illustration programs. Some majors, minors, and programs are of an interdisciplinary nature.

Undergraduate majors and minors are described under the department listings. Additional programs offered by the several departments of the Division are described in the section of this Catalogue entitled *Undergraduate Multidisciplinary and Pre-Professional Programs*.

A variety of undergraduate course offerings may be taken by students who neither major nor minor in the academic areas indicated above. These courses may be taken either as free electives or to fulfill the general education requirements of the College.

Working closely with their academic advisors, students may plan programs of study which prepare them for graduate school or for immediate entry into the job market. Those who anticipate teaching any of the natural sciences or mathematics should plan part of their academic program in Professional Education. Information on this matter may be found under the appropriate department of this Division as well as under the Department of High School, Middle School, and Adult Education.

GRADUATE PROGRAMS

The departments of the Division offer programs leading to the degrees of Master of Arts in Biology and Chemistry and Master of Arts in Teaching in Biology, Chemistry, Earth Sciences, Geography, Mathematics, Physical Sciences, and Physics. In addition, the Division offers a program leading to the Certificate of Advanced Graduate Study (CAGS) in Natural Sciences and Mathematics. Specific information about these programs may be found below, as well as under the departments of the Division, and in the section of this catalogue entitled *The Graduate School*.

Certificate of Advanced Graduate Study (CAGS) in Natural Sciences and Mathematics

The Division offers a program leading to a Certificate of Advanced Graduate Study (CAGS) in Natural Sciences and Mathematics. This program is designed to meet the varied career needs of professionals who have earned an appropriate master's degree and who wish to attain greater competence in a combination of areas of study in the field of natural sciences and mathematics. Areas of study include biology, chemistry, earth sciences, geography, mathematics, physical sciences, and physics. Ordinarily, the applicant's master's degree must be in an area within the field of natural sciences and mathematics. Applicants must demonstrate that they possess an academic and experiential background relevant to their field, and must indicate that their needs and goals are in accord with the objectives of the CAGS.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of the Catalogue. Each student's CAGS program must include the Division's CAGS Seminar in Natural Sciences and Mathematics (NS 599), which is designed to provide a broad conceptualization of the field, as well as to

focus the student's course of study on critical issues facing professionals in the field today. Remaining credit requirements will be fulfilled by courses selected under the direction of the advisor which clearly meet the student's academic and career needs.

Additional information regarding this program, including application procedures and general academic requirements, may be found in the Graduate School section of the catalogue.

DIVISIONAL COURSE OFFERINGS

NS 300 Science and the Impact of Technology 3 crs.

A study of the interplay of science and technology, the environmental, social, and economic consequences of technology, the effect of technical change on society, the management and control of technology, and the nature of the technological decision-making process. May be used to fulfill Group VI GER Elective only.

NS 400 Senior Interdisciplinary Seminar in Environmental Science 3 crs.

Prq.: An introductory course in environmental science or permission of the Instructors
Current environmental issues will be discussed and analyzed in detail from an interdisciplinary viewpoint. The importance of thorough analysis and planning in developing long term solutions to environmental problems will be emphasized. Faculty with appropriate interdisciplinary backgrounds will participate.

NS 411 Introduction to Medicine for the Non-physician 3 crs.

Prq.: BI 102 (or equivalent) and a semester of a college-level course in chemistry or physics, or consent of the Instructor

A survey of human medicine. Topics selected from anatomy, physiology, medical embryology, radiology, physical diagnosis, laboratory medicine, pathology, treatment of disease, and disease prevention.

NS 599 CAGS Seminar in Natural Sciences and Mathematics 3 crs.

Designed to provide a broad conceptualization of the field, focusing on critical issues facing professionals in science and mathematics today.

Department of Biological Sciences

Professor Walter Hewitson, Chairperson
Professors: James Brennan, Kenneth J. Howe, John Jahoda,
Lawrence Mish, Walter Morin, Florian Muckenthaler, William Wall
Assistant Professors: Hardy Moore, Diane Peabody

The Department offers an undergraduate program leading to the degree of Bachelor of Arts or Bachelor of Science and a graduate program leading to the degree of Master of Arts or Master of Arts in Teaching. The goal of the undergraduate program is to provide students with broad backgrounds allowing for flexibility in making career choices. Students enrolled in the graduate program have the opportunity to develop their skills and knowledge in more specialized areas.

UNDERGRADUATE PROGRAMS

Bachelor of Arts/Bachelor of Science

A broad background is promoted by a core of 27 (24) credits from the biological, botanical and zoological disciplines along with 18 credits from chemistry, mathematics and physics. Specifically, the following courses or their equivalents (as determined by the department) must be completed:

BI 100, BI 104 (may be omitted by students who earned a grade of A in BI 100), BI 240, BI 282 or BI 284, BI 321, BI 341, BI 373, BI 425 and BI 428. CH 131-132, a one semester course in mathematics (MA 103 is recommended) followed by a one semester course in calculus (MA 104 is recommended) or statistics or computer science, and PH 181-182.

The above courses and credits are required of Biology Majors who are minoring in Secondary Education or who have a second major with another academic department. Second majors especially appropriate to biologists today which would enhance employment opportunities are Chemistry, Computer Science and Physics, but a student might choose any other major approved by the College.

Students who are not minoring in Secondary Education or who have not officially declared a second major must complete the following additional requirements:

- Three biology elective courses (four biology elective courses if the student is not required to take BI 104).

- One year of a foreign language or CH 343-344 Organic Chemistry or CH 300 Organic Chemistry for Life Sciences plus BI 320 Biochemistry.

The purpose of the three (four) biology electives is to provide the student with the opportunity to complement the broad background obtained in the biological sciences with further training in an area of individual student interest. Normally, students should try to take the required courses in biology, chemistry, mathematics and physics in the following sequence:

Freshman: 1st Semester — BI 100, CH 131, MA 103; 2nd Semester — BI 104 if required), CH 132, MA 104 or statistics or computer science.

Sophomore: 1st Semester — BI 240, PH 181; 2nd Semester — BI 282 or BI 284, PH 182.

Junior: 1st Semester — BI 321, BI 341; foreign language or CH 343 or CH 300; 2nd Semester — BI 373; foreign language or CH 344 or BI 320.

Senior: 1st Semester — BI 425; 2nd Semester — BI 428 (Students minoring in Secondary Education should take BI 428 2nd Semester of the junior year and ED 490 during the 2nd Semester of the senior year).

Upon completion of the General Education Requirements for the College and the requirements for a major in the biological sciences, a student is left with a number of free elective courses to take, bringing the total number of credits earned to the 120 required for graduation. These free elective courses might be used most effectively to gain further knowledge and training in the biological sciences or cognate areas, to complete a minor in a discipline other than biology or to participate in one of the Multidisciplinary Programs (see catalogue section, Undergraduate Multidisciplinary and Pre-Professional Programs).

The following courses do not fulfill any of the requirements for the Biology Major: BI 110, BI 112, BI 115, BI 121, BI 171, BI 172, BI 210, BI 214, BI 216, BI 217, BI 224, BI 280 and BI 311.

Each student majoring in Biology will be assigned an advisor from among the faculty of the department. Students should consult with their advisors frequently to receive academic counseling and to verify that they are completing the requirements for graduation.

STUDENTS WHO HAVE NOT DECLARED A MAJOR AND WHO BELIEVE THEY MIGHT SELECT A MAJOR IN THE BIOLOGICAL SCIENCES SHOULD CONSULT WITH THE DEPARTMENTAL CHAIRPERSON AS SOON AS POSSIBLE. SUCH STUDENTS ESPECIALLY NEED EARLY COUNSELING IF THEY WISH TO GRADUATE IN THE NORMAL FOUR YEAR PERIOD.

Minor in the Biological Sciences

A minor consists of 18 credits in Biology. Students must take BI 100 or its equivalent and five additional courses planned in consultation with the departmental chairperson. Two types of minors can be designed by selecting from the wide variety of courses offered by the department.

Courses having laboratories which are normally taken by Biology Majors might be selected by those students planning to go to graduate schools in their major fields. This type of minor could provide the anatomical, physiological and hereditary background needed for a better understanding of such disciplines as Anthropology, Health and Physical Education, Psychology, Sociology and Communication Disorders, or it could strengthen the student's background for such merged disciplines as Biochemistry, Biophysics and Biometry. Earth Science Majors interested in historical geology might find structural and taxonomic courses in botany and zoology of benefit when trying to interpret the fossil record. Several courses could be appropriate for Geography Majors interested in environmental problems.

This type of minor need not be selected merely to reinforce the student's major. It might be selected simply because a student enjoys a particular area of biology and wishes to take additional courses. For example, students interested in horticulture might take such courses as Landscaping, Horticulture, Plant Propagation, Plant Anatomy, Plant Physiology, Biology of The Fungi and Entomology.

The second type of minor can be thought of as a liberal arts minor which relates to and supports the major discipline. Many of the nonlaboratory courses offered by the department would be appropriate to this type of minor. For example, a Philosophy Major interested in the philosophy of science could take one or more laboratory courses in biology for exposure to scientific methodology and the following nonlaboratory courses: The Biological Environment, Topics in Animal Behavior, Genetics and Human Endeavor, Biology and Human Thought, Microbiology and Man. These nonlaboratory courses would provide the Philosophy Major with historical perspective and an introduction to the major biological issues confronting the human species today. Such a minor could be appropriate to other disciplines as well.

GRADUATE PROGRAMS

Master of Arts

The Department offers a program leading to the degree of Master of Arts in Biology, which is designed to prepare qualified students for research, further graduate study and teaching.

All applicants for the degree shall be interviewed by the Chairperson of the Department for the purpose of assessing the student's background and determining research interests. If the applicant does not possess an adequate background, he or she may be required to correct deficiencies by enrolling in undergraduate courses without applying credit from those courses towards the graduate program requirements. The Chairperson shall also arrange for meetings with faculty who are likely to be involved in directing research and preparation of the thesis.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. In addition to meeting general degree requirements, the student must complete a minimum of thirty appropriate graduate credits in the biological sciences. All courses taken by the graduate student must have the approval of the faculty advisor. During the first semester of graduate work an oral preliminary examination will be given to aid the faculty advisor in planning the student's program of study.

A reading knowledge of one foreign language is required for the M.A. degree. Students may not register for courses beyond 12 credits until the language examination has been passed. No more than three attempts to satisfy the language requirements will be permitted.

Each student will be expected to participate in original research (up to nine of the thirty credits) under the direction of a faculty member and to prepare a thesis based upon the research. A student is required to register for BI 502 during any term that College facilities are being utilized or faculty supervision is required by the student to conduct research. Research opportunities are available within certain areas of the following general fields:

Animal Behavior	Evolution	Neurophysiology
Animal Physiology	Field Biology	Ornithology
Biochemistry	Genetics	Plant Anatomy
Cytology	Invertebrate Zoology	Plant Morphology
Developmental Biology	Marine Biology	Plant Physiology
Ecology	Microbiology	Plant Taxonomy
Entomology	Mycology	Ultrastructural Studies

The following courses may not be taken for graduate credit in the M.A. program: any course with a 100 number, BI 210, BI 211, BI 212, BI 214, BI 215, BI 216, BI 217, BI 224, BI 242, BI 270, BI 272 and BI 311.

Master of Arts in Teaching

The Department offers a program leading to the degree of Master of Arts in Teaching which is designed primarily for in-service teachers and future teachers, and to provide a foundation for further graduate work. All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. Students enrolled in the program must meet the general requirements for the degree (including 12 hours of course work selected from the four areas of professional study in education — consult the Graduate School section of this catalogue), plus the departmental requirements (a minimum of 18 semester hours of courses in the biological sciences).

Six of the 18 hours in the biological sciences must be from the field of botany and six from the field of zoology. The remaining six hours might be used for a thesis, for directed study, or course work in any of the biological areas. In addition, a student must have taken a course in genetics either at the undergraduate or graduate level and must take at least one of the courses listed under each of the following general areas:

Morphology and Systematics: BI 240, BI 273, BI 282, BI 284, BI 344, BI 422, BI 428, BI 475, BI 542, BI 544, BI 546, BI 576.

Physiology: BI 320, BI 341, BI 373, BI 481, BI 526, BI 571, BI 572

Field and Behavioral Biology: BI 221, BI 272, BI 275, BI 315, BI 326, BI 425, BI 473, BI 537, BI 581, BI 583, BI 585

Cellular Biology: BI 324, BI 371, BI 430, BI 433, BI 434, BI 520

The following courses may not be taken for graduate credit in the M.A.T. program: any course with a 100 number, BI 210, BI 211, BI 214, BI 224.

COURSE OFFERINGS*

BI 100 General Principles of Biology **3 crs.**

A study of biological principles at the cellular and organismal levels, including such topics as cell structure and function, respiration, photosynthesis, cell reproduction, DNA and protein synthesis, genetics, ecology and evolution. Two lectures and one two-hour laboratory period weekly.

BI 102 Introduction to Zoology **3 crs.**

The zoological aspects of biology with emphasis on such topics as: the nature of sciences and scientific thinking; the structure and physiology of cells, tissues, organs, and organ-systems; embryogeny; heredity; ecological and phylogenetic interrelationships; a general survey of the animal kingdom. Two lectures and one two-hour laboratory period weekly.

BI 104 Applied Principles of Biology **3 crs.**

Prq.: BI 100 or consent of the Instructor

A survey of the biological kingdoms with emphasis on general principles of biology as they relate to the different groups of organisms. Two lectures and one two-hour laboratory period weekly.

BI 110 Man and Nature **3 crs.**

A course that includes consideration of humans and their role in the natural world. The structure and function of the different systems of a human being as a member of the animal kingdom will be taken up. Other topics covered will include a basis for understanding human reproduction and heredity, the human's role in the pattern of evolution and human interaction with the rest of the living and nonliving world. Students may not submit both BI 102 and BI 110 to fulfill the general education requirements in science. Three one-hour lectures weekly.

BI 112 Biology and Human Thought **3 crs.**

The science of living organisms in relation to the cultural development of humans. The sources of modern biology, concepts of evolution, and levels of biological organization are included. Primarily for non-science majors. Three lectures weekly.

BI 114 Basic Horticulture **3 crs.**

A study of the interactions between plant structure, function and environmental factors as they relate to the growth and propagation of cultivated plants. Three lectures weekly.

BI 115 Microbiology and Man **3 crs.**

A course designed to introduce the topic of microorganisms in the environment and man's interaction with them. The course covers milestones in the early study of microorganisms, the microorganisms themselves (bacteria, fungi, algae, protozoa, viruses) and basic techniques used in studying them. In addition, microorganisms will be studied as active members of the environment, as causal agents of disease, as important participants in industry, and as model systems for the study of certain biological principles. Three lectures weekly.

BI 121 Conservation of Natural Resources **3 crs.**

A course stressing the importance of conservation of natural resources, especially water, and the role of plants and animals in the maintenance and replenishment of our natural heritage. Lectures, guest speakers, readings, and field trips to good and bad examples of conservation practice will form an important segment of the course. The course is designed as an exposition of the conservation problems of Southeastern Massachusetts and will be aimed at teachers of junior and senior high school biology and general science, city and town officials concerned with water, sewage, forestry, conservation, and industrial development and planning. One two-hour lecture and one three-hour laboratory period weekly.

*See page 83 for general information regarding course offerings.

BI 171 Human Anatomy and Physiology I

4 crs.

Principles of cellular and general physiology; cell, tissue and organs structure; structure and function of the skeletal, muscular and nervous systems. Three one-hour lectures and one two-hour laboratory period weekly.

BI 172 Human Anatomy and Physiology II

4 crs.

The structure and function of the circulatory, excretory, digestive, respiratory and endocrine systems. Intermediary metabolism and reproduction will also be discussed. Three one-hour lectures and one two-hour laboratory period weekly.

BI 210 The Biological Environment

3 crs.

A course emphasizing current and future problems associated with man in his environment. The biological relationship between man and other living forms is discussed in terms of man's historical and present role in nature. Topics to be covered include: basic ecological principles, various aspects of pollution, population, and environmental disturbances. Three lectures weekly.

BI 211 Landscaping

3 crs.

A course designed to introduce the principles behind formal, informal and naturalistic landscaping practices. Emphasis will be divided equally among three major areas, identifying-selecting, planting-maintaining and designing-arranging of plant materials in the landscape with a goal of improving the aesthetic and functional values of the landscape. Three lectures weekly.

BI 212 Plant Propagation

3 crs.

A course designed to introduce the principles and practices of propagating plants. Techniques of cuttage, grafting, budding, layering and propagation by seed will be emphasized. Three lectures weekly.

BI 213 Trees and Shrubs

3 crs.

The identification and classification of woody plants native and introduced to the local area. Students will be exposed to lectures, demonstrations or proper collecting and preserving techniques, keying and some short local field trips. Three one-hour periods weekly.

BI 214 CPR Instructor's Course

1 cr.

A course designed to certify persons as instructors of CPR according to the standards of the American Heart Association. Students will become familiar with the anatomy and physiology of the cardiopulmonary system, risk factors, symptoms, one and two person rescue of an adult, one person rescue of an infant and child, and opening the obstructed airway. Students in pairs will be responsible for obtaining eight students and teaching those students a rescuer's course in CPR. Three hours per week for one quarter.

BI 215 Drugs of Plant Origin

3 crs.

The formation, identity, and specific effects of plant materials that influence the course of human disease, discomfort and well-being. Three lectures weekly.

BI 216 The Insect World

3 crs.

An introduction to the study of insects for the non-biology major. Emphasis is placed on the biology and recognition of the major groups of insects, as they relate to our general environment, food supply and health. Three lectures weekly.

BI 217 Man, Insects and Disease

3 crs.

A survey of the insects and related organisms that cause medical problems throughout the world, and their effect on the health and welfare of human societies. Three lectures weekly.

BI 221 Field Natural History

3 crs.

Prq.: BI 100 (or equivalent) or consent of the Instructor

The identification of local plants and animals with emphasis on the natural history of common plants and animals, dominant biotic communities of Southeastern Massachusetts, general

morphology and taxonomy of organisms, and techniques of collecting and preserving. Two lectures and one two-hour laboratory period weekly.

BI 224 Introduction to Microbiology

4 crs.

Prq.: BI 171, CH 125 (or equivalent)

A course designed to introduce the principles of microbiology to nurses. Emphasis will be placed on the characterization and cultivation of bacteria; reproduction, growth and metabolism of bacteria; microorganisms other than bacteria, i.e., protozoa, algae, fungi, viruses; control of microorganisms; microorganisms and disease. Three lectures and one two-hour laboratory period weekly.

BI 240 Plant Morphology

3 crs.

Prq.: BI 100 (or equivalent) or consent of the Instructor

A survey of the plant kingdom from the Monera through the angiosperms with emphasis on evolutionary adaptations associated with each group and phylogenetic relationships between the divisions as reflected in present day classification systems. Two lectures and one two-hour laboratory period weekly.

BI 241 Plant Anatomy

3 crs.

Prq.: BI 100 (or equivalent) or consent of the Instructor

A comparative study of the structural, functional, developmental and phylogenetic characteristics of cells, tissues, and organs in the vascular plants with emphasis on the angiosperms. Two lectures and one two-hour laboratory period weekly.

BI 242 Plants and Man

3 crs.

Prq.: BI 100 (or equivalent)

A study of the value of plants to mankind; special emphasis given to plants used as foods, fibers, lumber, fuel, clothing, medicine, poison, beverages, dyes and condiments. Three lectures weekly.

BI 270 Biological Foundations of Normal and Therapeutic Nutrition

3 crs.

Prq.: BI 172 (may be taken concurrently), CH 125 (or equivalent) or consent of the Instructor
An introduction to the theory and application of nutritional principles. Topics include: identity, physiological functions, sources, and preservation of nutrients required by the human. Diet-generated disorders and the use of diet in disease treatment are also discussed. Three lectures weekly.

BI 272 Topics in Animal Behavior

3 crs.

An introduction to the study of the behavior of animals. This lecture and discussion course will cover major topics of animal behavior, including conflict behavior, display and ritualized behavior, drives, motivation, stimuli, reflexes, animal communication, learning, social behavior, migration and biological rhythms. Emphasis will be given where applicable to the relationship of animal behavior to human behavior. Three lectures weekly.

BI 273 Vertebrate Zoology

3 crs.

Prq.: BI 100 (or equivalent) or consent of the Instructor

A taxonomic and evolutionary analysis of the functional morphology, systematics, behavior and evolution of the major vertebrate classes. Principal emphasis on taxonomy, systematics and concepts of zoogeography. Two lectures and one two-hour laboratory period weekly.

BI 275 Ornithology

3 crs.

Prq.: BI 100 (or equivalent) or consent of the Instructor

Basic structure, life history, migration, and identification of local birds. Two lectures and one two-hour laboratory period weekly. Early morning and weekend field trips.

BI 280 Human Physiology

3 crs.

Prq.: BI 102 or consent of the Instructor

General physiological principles and their application to the human body. Two lectures and one two-hour laboratory period weekly.

BI 282 Comparative Chordate Anatomy

3 crs.

Prq.: BI 100 (or equivalent) or consent of the Instructor

An ontogenetic and phylogenetic survey of chordate gross anatomy, supplemented by laboratory dissections of representative species. Emphasis is placed on ecomorphology and the changes in chordate structure and biology that comprise their evolution, with an analysis of the significance of these changes in light of our modern knowledge of evolution. Two lectures and one two-hour laboratory period weekly.

BI 284 Invertebrate Zoology

3 crs.

Prq.: BI 100 (or equivalent) or consent of the Instructor

The biology of invertebrates from a phylogenetic standpoint with emphasis on taxonomy, morphology, physiology, development, and natural history. Representatives of the principal classes of each phylum are studied. Two lectures and one two-hour laboratory period weekly.

BI 311 Heredity and Human Endeavor

3 crs.

Prq.: BI 100 (or equivalent) or consent of the Instructor

The principles of genetics which are important to an understanding of the hereditary mechanism in humans. Individual differences in relation to gene-environment interaction and the role of heredity in education, governance, and society. Primarily an elective for non-science majors. Three lectures weekly.

BI 313 Techniques of Interpretation for the Naturalist

3 crs.

Prq.: At least junior standing, or consent of the Instructor

Techniques of presentation of information concerning our natural heritage through public parks and preserves. The prudent use of public park land as camp grounds, recreation areas, natural study sites, and interpretive facilities will be discussed. Meaningful participation in planning and presentation of campfire talks, guided walks, and interpretive displays are an important feature of the course. The techniques utilized are appropriate to students preparing for careers involving interpretation of scientific phenomena in parks, forests, or museums. Also useful to students majoring in educational, historical, anthropological or archeological curricular. One lecture and one three-hour lecture demonstration weekly.

BI 315 Seminar on Human Sexual Reproduction

3 crs.

Prq.: BI 100 (or equivalent) or consent of the Instructor

Sperm and egg production; fertilization; embryology of fetus; development and physiology of fetus; hormones in reproduction (sexual cycles, pregnancy and lactation); sexual behavior and artificial controls of reproduction. Three lectures weekly.

BI 320 Biochemistry

3 crs.

Prq.: BI 100; BI 104 or BI 240; CH 131-132; one semester college level mathematics; (or equivalent) or consent of the Instructor

A study of the functions, chemical transformations, and attendant energy changes associated with basic biological phenomena. Three lectures weekly.

BI 321 Genetics

3 crs.

Prq.: BI 100, BI 104 or BI 240; CH 131-132; MA 103-104 (or equivalent) or consent of the Instructor

Analysis of the basic principles underlying heredity and the mechanisms involved in the replication, recombination, mutation, variation and expression of genetic material in representative plant, animal and microbial systems. Two lectures and one two-hour laboratory period weekly.

BI 324 Microscopical Technique

3 crs.

Prq.: BI 100; BI 104 or BI 240; CH 131-132 (or equivalent) or consent of the Instructor
A consideration of the use of the light microscope in studying biological materials. The course includes study of different uses of the light microscope and preparation of cells and tissues for examination with the light microscope. Preparation of whole mounts, sections, and introduction to histochemistry will be included in the laboratory. One lecture and two two-hour laboratory period weekly.

BI 326 Marine Biology

3 crs.

Prq.: BI 100 (or equivalent) or consent of the Instructor
An introduction to the marine ecosystems with emphasis on factors involved in the growth, diversity, and distribution of populations occupying the marine habitats of the Eastern Atlantic coast. Two lectures and one two-hour laboratory period weekly.

BI 341 Plant Physiology

3 crs.

Prq.: BI 100; BI 104 or BI 240; CH 131-132 (or equivalent) or consent of the Instructor
The growth and function of plants including cellular physiology, water relations, metabolism, respiration, photosynthesis, nutrition, growth regulation, and the influence of environment. Two lectures and one two-hour laboratory period weekly.

BI 344 Biology of the Fungi

3 crs.

Prq.: BI 100; BI 104 or BI 240; CH 131-132 (or equivalent) or consent of the Instructor
An introduction to the morphology, taxonomy, and physiology of the fungi. Two lectures and one two-hour laboratory period weekly.

BI 371 Histology

3 crs.

Prq.: BI 100; BI 282 or BI 284; CH 131-132 (or equivalent) or consent of the Instructor
A study of the microscopic anatomy of mammalian tissue and organs with emphasis on human materials. The study of prepared slides in the laboratory will serve as a basis for discussion of the interdependence of structure and function in the animal body. Two lectures and one two-hour laboratory period weekly.

BI 373 Animal Physiology

3 crs.

Prq.: BI 100, CH 131-132 (or equivalents) or consent of the Instructor
Physiological principles concerned in irritability, contraction, circulation, gas exchange, excretion, and hormonal regulation. Two lectures and one two-hour laboratory period weekly.

BI 421 Seminar in Biology

1 cr.

Prq.: Consent of the Instructor
In-depth consideration of current problems and research in the biological sciences.

BI 422 Biological Evolution

2 crs.

Prq.: BI 321 or consent of the Instructor
The theory of evolution and the operation of evolutionary forces as related to modern taxonomy, with emphasis on such topics as mutation, variation, hybridization, polyploidy, isolation, natural selection, and population genetics. Two lectures weekly.

BI 425 Ecology

3 crs.

Prq.: BI 321; BI 341 or consent of the Instructor
The dynamics and evolution of populations, communities, and eco-systems. Students become acquainted with the communities of Southeastern Massachusetts through field studies. Two lectures and one two-hour laboratory period weekly.

BI 428 Microbiology

3 crs.

Prq.: BI 100; BI 104 or BI 240; BI 341; CH 131-132 (or equivalent) or consent of the Instructor
An introduction to the structure, function, and ecology of microorganisms with emphasis on bacteria and viruses. Two lectures and one two-hour laboratory period weekly.

BI 430 Developmental Biology

3 crs.

Prq.: BI 100; BI 282 or BI 284; CH 131-132 (or equivalent) or consent of the Instructor

A study of developmental processes at different levels of organization with emphasis on animal development. Topics include gametogenesis, fertilization, early embryonic development, organogenesis, differentiation, growth and regeneration. Two lectures and one two-hour laboratory period weekly.

BI 433 Cytology

3 crs.

Prq.: BI 100; BI 104 or BI 240 (or equivalents) or consent of the Instructor

Cellular morphology and organization including descriptions of major intracellular processes and the functional significance of cellular structures. Two lectures and one two-hour laboratory period weekly.

BI 434 Biological Electron Microscopy

3 crs.

Prq.: BI 433 or consent of the Instructor

An introduction to the techniques of tissue preparation including fixation, dehydration and embedment procedures, followed by sectioning and staining, practical use of the electron microscope and interpretation of electron photomicrographs. Basic principles of tissue preparation and applications of electron microscopy will be stressed. One lecture and one three-hour laboratory period weekly.

BI 435 Problem Solving with the Computer in Biology

3 crs.

Prq.: At least junior standing with 15 credits in biology courses. CS 100 or CS 101 (students will be required to write computer programs in either BASIC or PASCAL)

The solution of mathematical problems in various areas of biology with the computer. Identification and analysis of problems followed by algorithm construction and preparation of effective computer programs. An introduction to significant problem solving with computer in areas such as genetics, population biology, microbiology, and physiology. Three lectures weekly.

BI 473 General Entomology

3 crs.

Prq.: BI 100 (or equivalent) or consent of the Instructor

A study of the biology and control of insects with emphasis on the taxonomy of the orders and major families. Formation of an identified insect collection is included. Two lectures and one two-hour laboratory period weekly.

BI 475 Parasitology

3 crs.

Prq.: BI 100 (or equivalent) or consent of the Instructor

The biology of animal parasites and their vectors with emphasis on morphology, physiology, development, taxonomy, and distribution. Representatives of the principal groups of parasites are studied in the laboratory. Two lectures and one two-hour laboratory period weekly.

BI 481 Sensory Physiology

3 crs.

Prq.: BI 100, BI 373 (or equivalent) or consent of the Instructor

Discussion of the structure and function of human sensory receptors; vision, hearing, touch, smell, taste; muscle receptors and autonomic receptors. Three lectures weekly.

BI 498 Internship in Biology

3-15 crs.

Prq.: Consent of the Department

Internships include research, laboratory or occupational experience in industrial, allied health, educational, medical, governmental, recreational, regulatory or other organizations outside of the College. No more than six (6) credits may be used toward the biology major electives.

BI 499 Directed Study in Biology

1-3 crs.

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

BI 502 Research

credit to be arranged

Original research undertaken by the graduate student in his/her field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

BI 503 Directed Study

credit to be arranged

Designed for the graduate student who desires to study selected topics in his/her field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

BI 504 Advanced Seminar in Selected Modern Biological Topics: 3 crs.

A study of significant recent work in a specific area of biological research. Students will be expected to do considerable library research, make oral presentations, and present a satisfactory written summary of their work.

BI 520 Developmental Genetics

3 crs.

Prq.: BI 321, CH 131-132, or consent of the Instructor

An examination of current knowledge of the genetic basis of developmental processes. Mechanisms of expression of genetic information during the early stages of development will be discussed. Differential gene function as the basis of differentiation will be considered along with genetic control mechanisms, genetic interaction at different levels and regulation of gene function. Three lectures weekly.

BI 526 Microbial Physiology

3 crs.

Prq.: BI 320, BI 321, BI 428, CH 344 or consent of the Instructor

A advanced study of bacteria and fungi emphasizing their nutrition, growth, death, and chemical activities. Laboratory work will demonstrate some research methods of microbial physiology and illustrate some representative physiological systems. Two lectures and one two-hour laboratory period weekly.

BI 537 Intertidal Biology

3 crs.

Prq.: A course in Ecology or Marine Biology or consent of the Instructor

A study of the dynamics of intertidal ecosystems with emphasis on factors involved in the similarity and diversity of occurrence and distribution of intertidal plants and animals. Two lectures and one two-hour laboratory period weekly.

BI 542 Comparative Morphology of the Vascular Plants

3 crs.

Prq.: BI 240, BI 422 or consent of the Instructor

The vascular plants from the psilopsids to the angiosperms using classical and contemporary data for the evaluation of phylogenetic and phenetic relationships. Two lectures and one two-hour laboratory period weekly.

BI 544 Experimental Morphology of Angiosperms

3 crs.

Prq.: BI 240, BI 321, BI 341, one semester of college level mathematics, or consent of the Instructor

The growth and development of flowering plants as revealed by experimental modification of their environment, including an investigation of the basic molecular processes involved in genetic control of plant development and their interaction with hormonal mechanisms and environmental influences. Two lectures and one two-hour laboratory period weekly.

BI 546 Taxonomy of Spermatophytes

3 crs.

Prq.: BI 221, BI 240, or consent of the Instructor

A survey of the seed plants; their structures, taxonomy, phylogeny, and ecological importance. Two lectures and one two-hour laboratory period weekly.

BI 571 Neurophysiology I

3 crs.

Prq.: BI 373 or consent of the Instructor

The physiology of the peripheral nervous systems, receptors, and muscles, considered in both vertebrates and invertebrates. Two lectures and one two-hour laboratory period weekly.

BI 572 Neurophysiology II

3 crs.

Prq.: BI 373 or consent of the Instructor (BI 571 need not precede BI 572)

The central nervous system of invertebrates and vertebrates including anatomical, physiological, and biochemical aspects. When appropriate, some behavioral studies will be considered. Two lectures and one two-hour laboratory period weekly.

BI 576 Advanced Entomology

3 crs.

Prq.: BI 473 or consent of the Instructor

The biology of insects including the immature stages. Topics include: morphology, physiology, development, taxonomy and ecology. Two lectures and one two-hour laboratory period weekly.

BI 581 Mammalogy

3 crs.

Prq.: BI 282 or BI 273 or consent of the Instructor

The classification, distribution, life histories, techniques of collection and preservation, ecology, and ethology of mammals. Two lectures and one two-hour laboratory period weekly.

BI 583 Comparative Ethology

3 crs.

Prq.: BI 282, BI 373 (or BI 280) or consent of the Instructor

Behavioral adaptations of animals to their environments and way of life. Introduction of the objective analysis of behavior patterns and use of patterns in clarifying evolutionary relationships. Two lectures and one two-hour laboratory period weekly.

BI 585 Ichthyology

3 crs.

Prq.: BI 282 or BI 273 or consent of the Instructor

Classification, distribution, economic value, identification, life histories, management, morphology, ethology, ecology, and preservation of fishes. Two lectures and one two-hour laboratory period weekly.



In the summer of 1980 Biology students Kym Goddu and Greg Potter (seated, left to right) accompanied Dr. John Jahoda of Biology faculty (standing rear) to complete a directed study in Tropical Marine Biology in the waters off the Bahamas. Here they display several of the more than 100 shell specimens they collected.

Department of Chemical Sciences

Professor Wilmon Chipman, Chairperson
Professors: Henry Daley, Jr., Vahe Marganian
Associate Professor: Margaret Souza
Assistant Professor: Joseph Pagano

The Department of Chemical Sciences offers programs leading to the degrees of Bachelor of Arts in Chemistry, Bachelor of Science in Chemistry, Master of Arts in Chemistry and Master of Arts in Teaching Chemistry. All of these programs are designed to provide the skills and knowledge necessary to prepare students for successful careers in the chemical industry, chemical research, teaching, oceanography and environmental science, or for further study in graduate degree programs.

UNDERGRADUATE PROGRAMS

Bachelor of Arts/Bachelor of Science

The department offers two major programs in Chemistry and also a Chemistry-Geology major jointly with the Department of Earth Sciences. The first major offered by the department, the major in Professional Chemistry, is designed for students who plan to go on to graduate work in chemistry or to do research in the chemical industry. The courses offered in this program meet the requirements of the American Chemical Society* for an approved major. Satisfactory performance in this program (B average) will give the student the professional preparation required for an assistantship or fellowship in graduate school. The second major, the major in Chemistry, is designed for students who wish to prepare for such fields as medicine, dentistry, the chemical industry, secondary school teaching, chemical sales work, pharmacy, oceanography, environmental sciences, sanitation chemistry, or veterinary science. Only a minimum number of chemistry courses is required so that a program suited to an individual's interests may be worked out with the student's faculty advisor.

***The Department of Chemical Sciences is on the list of approved schools of the American Chemical Society.**

The department participates in multidisciplinary programs for students preparing for careers in medicine, dentistry, or oceanography. Additional information on these programs may be found in the catalogue under *Undergraduate Multidisciplinary and Pre-Professional Programs*.

Professional Chemistry Major

CH 100 (or CS 101), 141-142 (or 131-132), 241-242, 343-344, 381-382, 450; MA 101-102, 201, 316; PH 243-244.

A one year study of German or French at the intermediate level or its equivalent. (A Professional Chemistry Major beginning a new foreign language is required to take only six hours of that language.) Students must also elect three advanced courses, at least two of which should be in chemistry at or above the 390 level and have CH 344 and CH 382 as prerequisites; making sure that their program contains 500 hours of laboratory instruction. The third course may be selected from a cognate area. (Elective courses must be approved by the advisor.)

Chemistry Major

CH 100 (or CS 101), 141-142 (or 131-132), 242, 343-344, 381-382; MA 101-102 (or MA 103-104 with the permission of the advisor); PH 243-244 (or PH 181-182 with the permission of the advisor); a one-year sequence in a foreign language at the intermediate level or the equivalent.

Chemistry-Geology Major

A Major in Chemistry-Geology is offered jointly with the Department of Earth Sciences. (See the catalogue section entitled *Undergraduate Multidisciplinary and Pre-Professional Programs* for detailed information).

Chemistry Minor

18 credits in chemistry.

Physical Sciences Minor

18 credits in chemistry and physics.

Additional Comments on Requirements:

The normal freshman program for a student interested in either chemistry major consists of CH 100 (or CS 101), CH 141-142, MA 101-102, and six credits toward the general education requirements. A student need not decide between the two chemistry majors until the second semester of his sophomore year. Students completing the Professional Chemistry major will meet the requirements for certification of the American Chemical Society.

Because of the sequential nature of the courses required of a chemistry major, a student considering majoring in chemistry must take MA 101-102 (or MA 103-104 with the permission of the advisor) and CH 141-142 in the freshman year or plan to attend summer school. For this reason any student considering the possibility of majoring in chemistry should consult a member of the department before registering for freshman courses.

GRADUATE PROGRAMS

Master of Arts

The Department of Chemical Sciences offers a program leading to the degree of Master of Arts in Chemistry, which is designed to prepare qualified students for research, further graduate study, and teaching. An undergraduate major in chemistry, or its equivalent, is normally required for admission to this program. Applicants must have satisfactorily completed the following: one semester of differential calculus, one semester of integral calculus, two semesters of calculus based physics, two semesters of general chemistry with laboratory, one semester of analytical chemistry, two semesters of organic chemistry and two semesters of physical chemistry. Other laboratory courses in chemistry are desirable.

Applicants must have an interview with the Chairman of the Department.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. In addition to meeting general degree requirements, the student must complete at least 30 graduate credits in chemistry which shall include at least six semester hours of thesis credit (CH 502). All courses must be approved by the advisor.

Each graduate student must satisfactorily complete the following core curriculum or present evidence that it has been successfully completed.

- CH 444 Advanced Inorganic Chemistry
- CH 450 Instrumental Analysis
- CH 597 Advanced Physical Chemistry I

CH 598 Advanced Physical Chemistry II
CH 591 Advanced Organic Chemistry I
CH 592 Advanced Organic Chemistry II

A reading knowledge of German and Russian (or, if approved, a demonstrated competence with another appropriate research tool, such as computer programming) is required for the degree.

The departmental offerings listed below include the following courses which may not be used to meet M.A. degree requirements:

Any Chemistry course numbered below 400, CH 499, and CH 585.

Master of Arts In Teaching

The Department of Chemical Sciences offers programs leading to the degree of Master of Arts in Teaching with concentrations in chemistry and physical science. These programs are designed primarily for teachers and future teachers of chemistry and physical science. All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. Degree requirements include a minimum of 12 appropriate graduate credits in designated areas of professional study (consult M.A.T degree requirements in the Graduate School section of this catalogue), and a minimum of 18 appropriate graduate credits in chemistry (approved by the program advisor on the basis of the background, interests, and needs of the student).

The departmental offerings listed below include the following courses which may not be taken for graduate credit: all courses at the 100 level, CH 202, CH 210, CH 390, and CH 499.

COURSE OFFERINGS*

CH 100 Computer Science in Chemistry

1 cr.

Introduction to computer programming as used in Chemistry. Particular emphasis will be on applications of BASIC for statistical studies.

CH 120 Chemistry for the Elementary School Teacher

3 crs.

The fundamental laws of chemistry are studied together with their application to elements and compounds, reactions and properties. Two lecture periods and one two-hour laboratory period weekly. The laboratory will be based on experiments in commercially available children's chemistry kits.

CH 125 Introductory Chemistry for the Life Sciences

4 crs.

Prq.: High School Chemistry or the equivalent

A study of the fundamental principals of general, organic and biological chemistry and their applications to physiological systems. Primarily for students of nursing and the allied health professions. Three lecture periods and one two-hour laboratory period weekly.

CH 131-132 General Chemistry with Qualitative Analysis I-II

3 crs. for each semester

The elements and their compounds, with emphasis on structure and its relationship to properties. CH 131 is prerequisite to CH 132. Two lecture periods and one two-hour laboratory meeting weekly.

CH 141-142 Inorganic Chemistry with Qualitative Analysis I-II

4 crs. for each semester

Theoretical inorganic chemistry with emphasis on mass-energy relationships in terms of structure and physical laws. Laboratory work emphasizes quantitative techniques. CH 141 is prerequisite to CH 142. Three lecture periods and one four-hour laboratory period weekly.

CH 202 Chemistry in Everyday Life

3 crs.

A lecture demonstration course on the application of chemistry to selected topics that an individual encounters in his daily life. Sample topics are: a) colloids and their relationship to foods and air pollution; b) acids, bases and pH; the effects of fertilizers; c) drugs; the nature of various chemical classes and their chemical effects on the human body. Three hours lecture.

CH 210 Chemistry and Society

3 crs.

A study of the effects that various discoveries in chemistry have had on society in the past and work that is presently underway in chemistry in an attempt to alleviate problems created by past discoveries.

CH 241 Inorganic Quantitative Analysis

3 crs.

Prq.: CH 132 or CH 142

The classical and modern methods for the volumetric and gravimetric determination of elements and groups. Two lecture periods and one four-hour laboratory period weekly.

CH 242 Intermediate Inorganic Chemistry

3 crs.

Prq.: CH 132 or CH 142

The descriptive chemistry, as well as synthesis and reactions, of nontransitional elements and their compounds are studied systematically. Correlations of structure and properties are explained on the basis of modern theories.

*See page 83 for general information regarding course offerings.

CH 250 Instrumentation

3 crs.

Prq.: CH 132 or permission of the Instructor

The physical chemistry basic to modern analytical instrumentation will be discussed as the basis for the study of instrumental analysis. Two hours of lecture and one two-hour laboratory period weekly.

CH 252 Recent Developments in Inorganic Chemistry

3 crs.

Prq.: CH 132 or CH 142

Current topics, such as ligand field theory of coordination complexes, molecular orbital theory, stereochemistry, crystallography, rare-earth elements, nonaqueous solvents, spectroscopy, and kinetics of inorganic reactions will be treated, according to the interests of the students.

CH 270 Introduction to Toxicology

3 crs.

This course is for individuals who have an interest in the methods employed to evaluate product safety, forensic chemistry and toxic substances encountered in the environment. Two lecture periods and one two-hour laboratory period weekly.

CH 280 Physical Chemistry for the Life Sciences

3 crs.

Prq.: CH 132 or CH 142

A study of the laws governing the physical and chemical behavior of compounds of primary interest to students in the Life Sciences field. Particular application will be made to the thermodynamics, kinetics and equilibria involved in compounds of biological interest.

CH 290 Environmental Chemistry

3 crs.

Prq.: CH 132 or CH 142

A study of the chemical aspects of such environmentally important problems as air and water pollution, solid waste disposal, thermal pollution, wastewater treatment, environmental antagonists, mercury pollution, the internal combustion engine, or other topics of current interest. Laboratory work will be concerned with techniques for detecting, monitoring and controlling environmental phenomena. Emphasis will be placed on the use of analytical techniques in determining ecological parameters. Lecture, laboratory and assigned special projects in the field.

CH 300 Organic Chemistry for the Life Sciences

4 crs.

Prq.: CH 132, or CH 125 and permission of the Instructor

The fundamentals of organic chemistry--structure, synthesis and mechanism--with applications to biological systems. Designed for students in the life sciences, e.g. nursing, medical technology, physical therapy and nutrition. Not recommended for students intending to pursue graduate study in microbiology, physiology or medicine. This course is not open to chemistry majors. Three lectures and one three-hour laboratory period weekly.

CH 343-344 Organic Chemistry I-II

4 crs. for each semester

Prq.: CH 132 or CH 142 and consent of the Instructor

A survey of the chemistry and organic compounds organized in terms of structure, mechanism of organic reactions, and synthesis. CH 343 is prerequisite to CH 344. Three lecture periods and one six-hour laboratory period weekly. (The same course may be taken without laboratory under CH 341, 342)

CH 372 Marine Chemistry

3 crs.

Prq.: CH 132 or CH 142

A study of the chemistry of the sea and the chemical exchange between hydrosphere, biosphere, lithosphere and atmosphere. Topics include: composition and properties of seawater, salinity, carbon dioxide system, nutrients and fertility of the ocean, chemical evolutions of the marine sediments and petroleum, chemical products of marine biota, isotope geochemistry, desalination, marine pollution and chemical resources from the ocean.

CH 381-382 Physical Chemistry I-II

4 crs. for each semester

Prq.: CH 132 or CH 142; MA 102

The laws governing the physical and chemical behavior of compounds. Three lecture periods and one four-hour laboratory period weekly.

CH 389 Introduction to the Chemical Literature

2 crs.

Prq.: CH 344 or permission of the Instructor

An introduction to methods of searching the chemical literature designed to prepare the student for a research project.

CH 390 Research Problems in Chemistry

credits to be arranged

Prq.: CH 344, CH 382 and Consent of the Department

Special projects for advanced students desiring individual instruction in the methods of chemical research. Hours arranged.

CH 392 Laboratory Techniques

3 crs.

Prq.: CH 344, CH 382

Special techniques used in the research laboratory, such as glass-blowing, vacuum line technique, vacuum distillation, dry-box operations and advanced synthetic methods. Hours arranged.

CH 396 Introduction to Laboratory Automation

2 crs.

Prq.: CH 100 or a knowledge of Basic Programming

The use of microcomputers for data acquisition and analysis. A study of transistors, amplifiers, op. amps., the differential amps, power supplies, regulators and filters as used in laboratory instruments. The interfacing of these instruments, especially using the IEEE-GPIB bus, to microcomputers to receive and analyze data will be covered. Projects will be assigned in which the student works in the laboratory gathering data directly on a computer. One hour of lecture and two hours of laboratory weekly.

CH 440 Advanced Organic Chemistry

3 crs.

Prq.: CH 344, CH 382 or consent of the Instructor

Selected topics in advanced organic chemistry, such as physical organic chemistry, alicyclic and heterocyclic chemistry, natural products, and advanced synthetic methods. Hours arranged.

CH 442 Qualitative Organic Analysis

3 crs.

Prq.: CH 344, CH 382 or consent of the Instructor

The reactions of organic compounds with emphasis on those of importance for classification and identification and the elucidation of structure by spectroscopic analysis. Laboratory work involves the identification of both simple compounds and mixtures. One lecture period and one six-hour laboratory period weekly.

CH 444 Advanced Inorganic Chemistry

3 crs.

Prq.: CH 382, CH 344

The topics of group theory, stereochemistry, ligand field theory, molecular orbital theory, synthesis and kinetics of reactions as applied to transition metal elements will be treated in detail. CH 382 may be taken concurrently. Hours arranged.

CH 450 Instrumental Analysis

3 crs.

Prq.: CH 382

Theory and practical application of instrumental methods as applied to chemical analysis; including pH measurements, electro-deposition, potentiometry, crystallography, mass spectrometry and spectroscopy. CH 382 may be taken concurrently. Two lecture periods and one four-hour laboratory period weekly.

CH 461 General Biochemistry I

4 crs.

Prq.: CH 344 or consent of the Instructor

A survey of the chemical components of living matter and the major processes of cellular metabolism. Three lecture periods and one three hour laboratory period weekly.

CH 462 General Biochemistry II

3 crs.

Prq.: CH 461

A survey of the chemical components of living matter and the major processes of cellular metabolism. Three lecture periods weekly. The laboratory portion may be taken independent of the lecture under CH 466, Advanced Biochemistry Laboratory.

CH 466 Advanced Biochemistry Laboratory

2 crs.

Prq.: CH 461

A study of special laboratory techniques used in biochemical research, such as chromatography, enzymology, radiochemical techniques, electrophoresis, and metabolic pathways. An individual project will complete the laboratory. One hour of laboratory discussion and three hours of laboratory per week.

CH 498 Internship in Chemical Sciences

3-15 crs.

Prq.: Consent of the Department

Laboratory experience in industrial or government laboratories, regulating agencies or academic laboratories at other institutions.

CH 499 Directed Study in Chemistry

1-3 crs.

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

CH 502 Research

credit to be arranged

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

CH 503 Directed Study

credit to be arranged

Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

CH 582 Biochemistry — Topics

3 crs.

Prq.: CH 462 or permission of the Instructor

An in depth examination of one area in biochemistry. Included will be a discussion of: laboratory techniques used in separation and purification, chemical structures and the interactions and functions of the biomolecules appropriate to the area of study. A critique of original literature will also be included.

CH 585 Atomic and Molecular Structure

3 crs.

Prq.: Permission of the Instructor

A modern approach to atomic and molecular structure will be developed and applied to selected cases from inorganic and organic chemistry. Topics to be covered will include the following: atomic structure, the molecular orbital approach to molecular structure, antibonding orbitals, introductory ligand field theory, geometrical and optical isomerism, conformational analysis, correlation of structure and reactivity, and the conservation or orbital symmetry.

CH 591 Advanced Organic Chemistry I, Structure

3 crs.

Prq.: CH 344

Instrumental techniques of organic structure determination such as infra-red, ultraviolet and proton magnetic resonance spectroscopy and methods of separation and identification. Classic examples of modern structure proofs will be considered in detail. Students will conduct a

literature search on the structure of an organic molecule and present a short seminar on this structure proof. Practical experience with IR, UV, NMR and gas chromatography of the structure of an unknown organic molecule.

CH 592 Advanced Organic Chemistry II, Mechanism and Synthesis **3 crs.**

Prq.: CH 344 and 591, or permission of the Instructor

A one-semester course in advanced organic chemistry designed for participants who have some background in elementary organic chemistry. Topics to be considered will include recent developments in the mechanism or organic reactions and organic synthesis. Special topics may include valence tautomerism, biogenetic synthesis, photochemistry, cycloaddition reactions and the Woodward-Hoffman rules for the conservation of orbital symmetry.

CH 597 Advanced Physical Chemistry I, Chemical Thermodynamics & Statistical Thermodynamics **3 crs.**

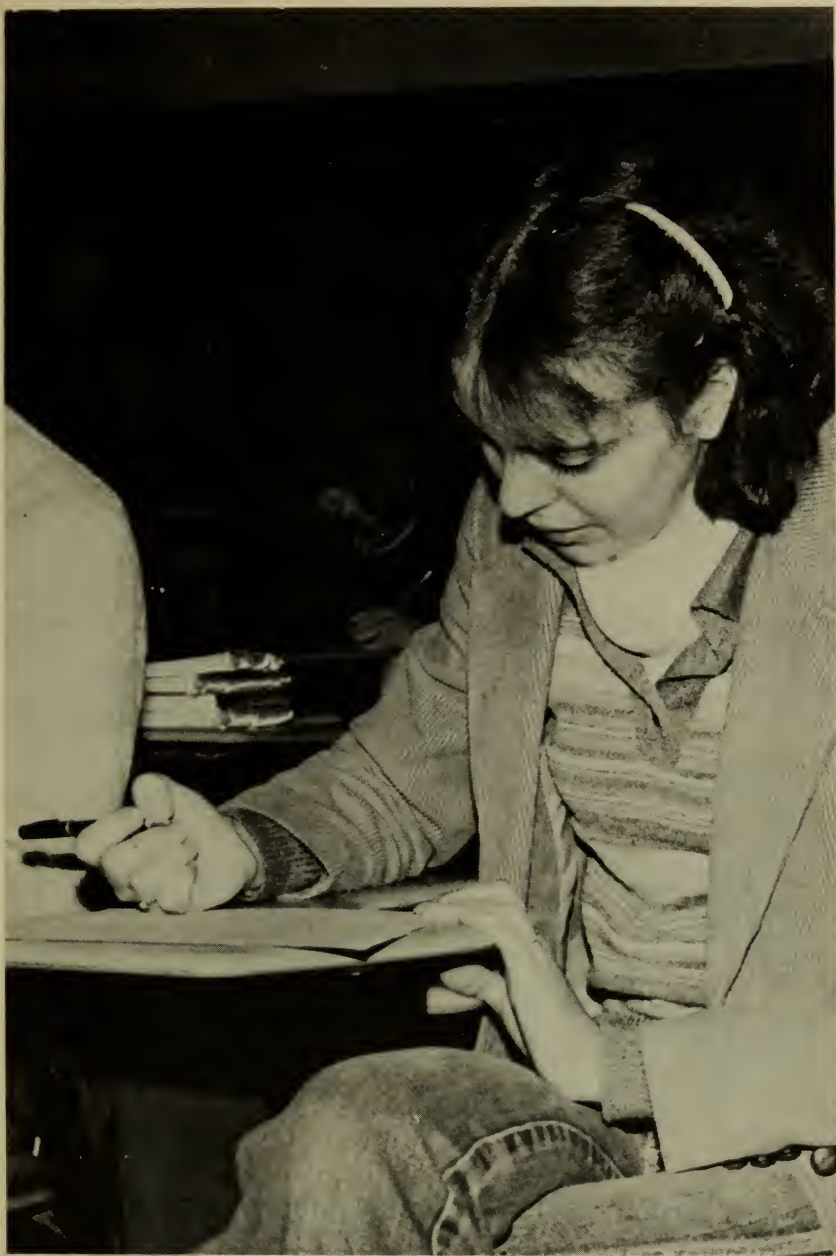
Prq.: CH 382

The zeroeth, first and second laws of thermodynamics, entropy and free energy functions, probability and the thermodynamic functions from a statistical consideration, the participation function.

CH 598 Advanced Physical Chemistry II, Atomic & Molecular Structure and Kinetics **3 crs.**

Prq.: CH 382

An introduction to quantum chemistry, rotational and vibrational levels, first second and third order reactions, the Arrhenius Equation and energy of activation, consecutive reactions, collision and transition state theories.



Department of Earth Sciences & Geography

Professor Robert Dillman, Chairperson
Professors: Robert Boutilier, Richard Enright, Ira Furlong,
Emanuel Maier, Agrippina Macewicz
Associate Professor: John DeLuca
Assistant Professors: Timothy Barker, Paul Blackford,
Marilyn Furlong, Reed Stewart, Jacek Sulanowski

The Department of Earth Sciences and Geography offers undergraduate majors in earth sciences, geography, aviation science, and management science. Majors in earth sciences may elect a concentration in geology; majors in aviation science may concentrate in either flight training or aviation management; majors in management science may concentrate in either general management or environmental and energy resources management. In addition, programs in chemistry-geology, oceanography, and urban affairs and planning are available. See *Undergraduate Multidisciplinary and Pre-Professional Programs* elsewhere in this Catalogue.

The Center for Energy and Environmental Studies is an active section of the department working on projects related to State and Regional problems. Research on alternate energy sources, coastal storm impacts, regional transportation planning, and coal potential in Southeastern Massachusetts are some of the current projects.

Programs leading to the degree of Master of Arts in Teaching with a concentration in earth sciences or geography are offered by the Department.

Modern equipment enables the department to offer investigation oriented laboratory experience. This equipment includes: (1) an X-ray Diffractometer with powder cameras; (2) thin section equipment; (3) polarizing and stereoscopic microscopes; (4) atomic absorption spectrophotometer; (5) seismic refraction unit; (6) surveying equipment; (7) a proton procession magnetometer; (8) earth resistivity unit, and (9) Frantz Isodynamic Separator.

In addition, the department has a well equipped cartographic laboratory, a climatological station with solar radiation recording instrumentation, and an astronomy observatory. Finally, this department has access to a scanning electron microscope through the Southeastern Massachusetts Consortium.

UNDERGRADUATE PROGRAMS

Bachelor of Arts/Bachelor of Science

GEOGRAPHY

The geography major is designed to provide the student with an understanding and appreciation of the physical and cultural attributes of the world in which he lives.

Opportunities for graduates include careers as geographers or cartographers in private industry, in many federal, state and local agencies, in urban and regional planning, in marketing and business offices, in governmental or private environmental offices, and as secondary school teachers. Courses leading to specialization in the following areas are available:

1. Urban and Regional Planning*
2. Environmental and Resources Management*
3. Business*
4. Regional Studies
5. Education

*Internships are available within these areas.

Geography Major

GE 100, GS 110, GE 216, GE 304, GS 362, GE 471, GS 353 or GS 473; Three additional Physical Geography or Earth Sciences courses; One course from: GE 217, GE 354, GE 363, GE 418, GE 440; One regional geography course; MA 110 plus one year of mathematics; Competence in a modern foreign language at the intermediate level, as evidenced by completion of an intermediate level one year course, or an equivalent.

Not more than one "D" for a semester course in the major shall be accepted to fulfill the requirements for this program.

Geography Minor

GE 100, GS 110 plus four additional Geography courses recommended by the department.

EARTH SCIENCES

The major in earth sciences is a broad based program that provides the student with an understanding and appreciation of the physical aspects of the earth and universe. Career opportunities for graduates exist in government service, industry, conservation and park management, and environmental studies relating to environmental impact statements as well as in teaching in the secondary schools.

Earth Sciences Major

ES 100, ES 101, ES 284, ES 301 or 302, GE 303, ES 306, ES 372, ES 463, plus a minimum of three additional courses selected with the advisor's approval.

MA 101-102 or MA 103-104, CH 131-132 or CH 141-142, one year of Physics or Biology.

Competence in a modern foreign language at the intermediate level, as evidenced by completion of an intermediate level one year course, or an equivalent.

Not more than one "D" for a semester course in the major shall be accepted to fulfill the requirements for this program.

Earth Sciences Minor

ES 100, ES 101 plus four additional Earth Science courses as recommended by the department.

Geology Concentration

The concentration in geology provides students with an understanding of the physical aspects of the earth and the processes which act upon it. Students are prepared for government service, environmental work relating to impact studies and, for work in such fields as engineering, mining or petroleum geology.

ES 100, ES 101, ES 283, ES 284, ES 372, ES 463, ES 475; Four additional courses selected with the advisor's approval;
MA 103-104 or MA 101-102;
CH 131-132 or CH 141-142;
Physics or Biology-PH 181-182 or PH 242-244 or BI 100,104.
Competence in a modern foreign language at the intermediate level, as evidenced by completion of an intermediate level one year course, or an equivalent.

Not more than one "D" for a semester course in the major shall be accepted to fulfill the requirements for this program.

Chemistry-Geology Major

A Major in Chemistry-Geology is offered jointly with the Department of Chemical Sciences. See the catalogue section *Undergraduate Multidisciplinary and Pre-Professional Programs* for details.

AVIATION SCIENCE

The Aviation Science Program is designed to provide a coordinated program of liberal arts and either flight training or aviation management leading to a degree of Bachelor of Science or Bachelor of Arts. Students interested in future positions in industry related aviation, as either pilots or air station managers, and who wish to have sufficient background to participate in other aspects of business will benefit from this program. Numerous other careers may be realized from either of these concentrations and the options provided by the Aviation Science Program. For complete information on this program consult with Dr. Kenneth Howe, Division Head or Professor John P. DeLuca, Coordinator of the Aviation Science Program. Flight Training costs are required in addition to regular tuition and fees.

Students seeking admission to the Flight Training concentration must pass a Class II or better FAA physical; the Aviation Management concentration requires at least a Class III FAA physical.

Flight Training Concentration

AS 101, 102, 103, 105, 106, 201, 202, 203, 204, 205, 211, 212, 301, 302, 303, 305, 306; MA 103-104, MA 110; PH 181-182; CC 200; CS 100; GE 100, GE 217, GE 303; EC 200.

Aviation Management Concentration

AS 101, 102, 103, 105, 106, 130, 140, 305, 306, 307, 308, 402, 407; MA 103-104, MA 110; PH 181-182; CC 200; CS 100, one computer programming course; GS 362; EN 201; one environmental science course; EC 200; AC 240-241.

MANAGEMENT SCIENCE

The aim of the Management Science program is to educate students for successful careers in business and management. This program will provide general education, specific liberal arts education, and specific management education for students interested in business, transportation, environment and energy resources fields.

Management Science Concentrations

Concentration in General Management

Concentration in Environmental and Energy Resources Management

For further information contact the Chairman of the Department.

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GRADUATE PROGRAMS

Master of Arts in Teaching

The Department offers a program leading to the degree of Master of Arts in Teaching with concentrations in earth sciences and geography, which are designed primarily for in-service teachers and future teachers, and to provide a foundation for further graduate work. All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. Graduate students enrolled in the M.A.T. program are required to have, or acquire outside of the degree program, a background of introductory college level courses in natural science and mathematics, to be determined by the department. Degree requirements include a minimum of 12 appropriate graduate credits in designated areas of professional study (consult M.A.T. degree requirements in the Graduate School section of this catalogue), and a minimum of 18 appropriate graduate credits in the academic concentration (approved by the program advisor on the basis of the background, interests, and needs of the student).

The departmental offerings listed below include the following courses which may not be taken for graduate credit: all courses in the 100 level, ES 201-202, ES 499, GE 499, GS 210, and GS 261-262.

COURSE OFFERINGS*

GEOGRAPHY AS A SOCIAL SCIENCE

Descriptions for courses in Geography as a Social Science are found in the Division of Social Sciences.

EARTH SCIENCES

ES 100 Physical Geology (formerly ES 181) 3 crs.

The constitution of the earth and the processes acting on and within it. Two lecture periods and one two-hour laboratory period weekly.

ES 101 Historical Geology (formerly ES 192) 3 crs.

Prq.: ES 100

The origin and evolution of the earth and the life upon it. Two lecture periods and one two-hour laboratory period weekly.

ES 102 History of the Earth 3 crs.

Prq.: ES 100

The origin and evolution of the earth and the life upon it. Major topics are geologic time, origin, and evolution of the continents, continental drift, plate tectonics. (May not be taken for credit if student has taken ES 101).

ES 194 Environmental Geology 3 crs.

Waste disposal, slope stability, shoreline and hydrologic problems, seismic and perma frost conditions and other topics as they pertain to the geologic environment in selected physiographic provinces of North America will be studied.

ES 201-202 Topics in Earth Science for Elementary School Teachers 1.5 crs. per quarter

ES 201 is an introduction to the use of rocks, minerals and fossils, while ES 202 introduces the processes that mold the earth's surface such as running water, glaciers, winds, and waves. Emphasis for both courses will be on investigations that can be conducted in the classroom or in the immediate vicinity of a school, with topics selected from, but not restricted to, nationally developed science curricula. Offered on a quarter basis with two, one hour lectures and one, two hour lab.

ES 220 Ceramic Materials 3 crs.

Prq.: Permission of the Instructor

The geologic processes producing the raw ceramic materials, their identification, extraction and purification as well as chemical treatments to alter their physical and chemical properties. Also, the physical and chemical changes occurring in such materials during drying and firing.

ES 230 Engineering Geology 3 crs.

Prq.: Permission of the Instructor

Geologic controls of engineering projects. Identification and treatment of problem areas.

ES 240 Hydrology 3 crs.

Prq.: Permission of the Instructor

Relations of surface to groundwater. Geologic controls of flow in ideal mathematical models and imperfect natural settings. Water supplies as reversible resource.

*See page 83 for general information regarding course offerings.

ES 283 Structural Geology

3 crs.

Prq.: ES 100

Analysis and origin of rock structures. Two lecture periods and one, two-hour lab period weekly.

ES 284 Geomorphology

3 crs.

Prq.: ES 100 or consent of the Instructor

Relationships between gradational and tectonic forces and the resulting surface configuration of the earth. Two lecture periods and one, two-hour laboratory period weekly.

ES 300 Excursions in Geology

3-6 crs.

Prq.: Permission of the Instructor

Preliminary lectures on a study area, followed by 1 to 6 weeks of interdisciplinary field study leading to a final report. Travel and living expenses will be borne by students. Study area will most likely be in the western U.S. although foreign areas are possible. This course is of interest to archaeology, biology, and geography majors as well as other students.

ES 301 Astronomy

3 crs.

Prq.: GE 100, GE 120, MA 103, PH 181 or consent of the Instructor

A study of the celestial sphere, motions of the moon and planets, and the history of man's attempts to understand these phenomena. There will be evening observation sessions and a trip to a nearby planetarium.

ES 302 Astronomy II

3 crs.

Prq.: ES 301 or consent of the Instructor

This course will be devoted to the study of the planets, the stars, stellar evolution, galaxies, cosmology and life in the universe. There will be evening observation sessions.

ES 305 Introduction to Oceanography I

3 crs.

Prq.: BI 101, BI 102, or consent of the Instructor

Survey of marine life forms and of the chemistry of seawater.

ES 306 Introduction to Oceanography II

3 crs.

Prq.: MA 101, 102, or 103 and MA 104 or consent of the Instructor

Ocean water temperature, circulation, salinity, instruments and methods of investigation.

ES 310 Geophysics

3 crs.

Prq.: Permission of the Instructor

A study of major earth forces, including discussions of the interior of the earth, heat distribution, convection and continental drift.

ES 311 Geochemistry

3 crs.

Prq.: Permission of the Instructor

Geological and chemical processes controlling the abundance and distribution of the elements at or near the earth's surface.

ES 372 Mineralogy

4 crs.

Prq.: ES 100 and CH 131

Geometrical and X-ray crystallography followed by the determinative mineralogy or ore and rock-forming minerals. Two lecture periods and two, two-hour laboratory periods weekly.

ES 373 Optical Mineralogy

3 crs.

Prq.: ES 372

Principles of optical crystallography. Measurement of optical constants with the polarizing microscope. One lecture period and two, two-hour laboratory periods weekly.

ES 374 Optical Petrology

3 crs.

Prq.: ES 373

Systematic study of rocks and rock-forming minerals with emphasis upon the use of the polarizing microscope, interpretation of mineral assemblages, texture and structures, problems of petrogenesis. One lecture period and two, two-hour laboratory periods weekly.

ES 375 X-ray Analysis

3 crs.

Prq.: Permission of the Instructor

Principles and methods of X-ray diffraction analysis. Theory and practice of preferred orientation chemical analysis by diffraction and fluorescence.

ES 413 Survey of Physical and Historical Geology

3 crs.

The structure and history of the earth as deduced from the study of life forms and their physical environment. Two lecture periods and one, two-hour laboratory period weekly. Biology majors only.

ES 462 Geology of North America

3 crs.

Prq.: ES 100

Physiographic provinces of North America in terms of geomorphology and structural relationships.

ES 463 Petrology

3 crs.

Prq.: ES 372

Megascopic and microscopic classification of rocks and an introduction to petrogenesis. One lecture and two, two-hour laboratory periods weekly.

ES 464 Economic Geology I

3 crs.

Prq.: ES 100

Geochemical and physical processes that produce economic mineral deposits. Two lecture periods and one, two-hour laboratory period weekly.

ES 465 Economic Geology II

3 crs.

Prq.: ES 100

Study of selected major metallic and non-metallic deposits, energy sources and hydrologic reserves. Methods of extraction and the resulting environmental impact. Two lecture periods and one, two-hour laboratory period weekly.

ES 466 Glacial Geology

3 crs.

Prq.: ES 100

The mechanics of glacial origin and movement, and the erosive and depositional features produced. Emphasis on the Pleistocene of North America. Two lecture periods and one, two-hour laboratory period weekly.

ES 475 Paleontology

3 crs.

Prq.: ES 100, 101 or consent of the Instructor

A survey of the fossil record stressing the most important invertebrate phyla and their environmental relationships. Two lecture periods and one, two-hour laboratory period weekly.

ES 476 Paleoenvironmental Reconstruction

3 crs.

Prq.: ES 100, 101 or consent of the Instructor

Introduction to modern concepts and principles in sedimentology, paleoecology, and correlation: lithostratigraphic and biostratigraphic classification and interpretation of depositional and organic environments. Two lecture periods and one, two-hour laboratory period weekly.

ES 477 Micropaleontology

3 crs.

Prq.: Permission of the Instructor

Identification and analysis of selected microfossils, Homeomorphism, Sexual Polymorphism, and evolution of microfossils. Ultra structures and the diagenesis.

ES 490 Field Methods in Geology

3 crs.

Prq.: ES 100, 101 or consent of the Instructor

Collection, processing and interpretation of field data developed by ecologic mapping. Presentation of geologic reports involving maps, cross-sections and sample data. One lecture period and two, two-hour laboratory periods weekly.

ES 497 Research in Earth Science

3 crs.

Preparation of a research paper in Earth Sciences.

ES 498 Field Experiences in Earth Science

3-15 crs.

Prq.: Consent of the Department

Intended to provide an opportunity for senior earth science majors to gain practical experience in the field. Placements will be made in appropriate local, state and federal agencies as well as with private corporations.

ES 499 Directed Study in Earth Science

1-3 crs.

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for maximum of six credits.

ES 502 Research

credit to be arranged

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

ES 503 Directed Study

credit to be arranged

Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

PHYSICAL GEOGRAPHY

GE 100 Man's Physical Environment (formerly ES 200)

3 crs.

An introduction to physical geography in which man-land relationships and the interaction of man with his total environment, including its landforms, atmosphere, climate, vegetation, and soils are examined. Field trips. Two lecture periods and one two-hour laboratory period weekly. (May not be taken for credit if student has taken GE 120.)

GE 120 Man's Physical World

3 crs.

This non-lab science course will treat the earth as the home of man. Basic concepts of physical geography will be studied including how man has changed the earth. (May not be taken for credit if student has taken GE 100.)

GE 196 Geography of Environmental Problems I

3 crs.

Interaction between man and his physical environment through the analysis of selected problems in population ecology, atmospheric pollution and climate change, water resource characteristics and distribution, soil contamination and erosion, and perception of environmental hazards of human settlement such as hurricanes, drought, floodplains, coastal erosion, earthquakes, and landslides.

GE 216 Cartography

3 crs.

Prq.: GE 100 or GE 120 or ES 100 or consent of the Instructor

Theory and practice in the design and drafting of maps, graphs and charts for the graphic presentation of geographical and statistical information. One lecture period and four laboratory hours weekly. Additional laboratory time may be required.

GE 217 Air Photo Interpretation -- Surveying **3 crs.**

Prq.: GE 100 or ES 120 or ES 100 or consent of the Instructor

Theory and practice in extracting information about the earth's physical and cultural features from aerial photographs. Introductory plane surveying theory and field practice. Two lecture periods and three laboratory hours per week. Additional laboratory and field time may be required.

GE 220 Outdoor-Indoor Investigations in Physical Geography **3 crs.**

Prq.: Consent of the Instructor

A demonstration and experiment course in physical geography designed for students interested in presenting simple experiments and outdoor environmental problems for elementary school children. Outdoor laboratory units will cover selected topics in weather, energy (solar and water), landscape evaluation, and pollution. A number of indoor demonstrations will be reserved for inclement weather. Two two-hour weekly investigations, including field trips.

GE 303 Meteorology **3 crs.**

Prq.: GE 100 or consent of the Instructor

Study of the basic atmospheric processes that result in weather, regional weather systems. Basic instrumentation and practice in observing, data presentation, and interpretation of weather maps. Two lecture periods and one two-hour laboratory period weekly.

GE 304 Climatology **3 crs.**

Prq.: GE 100 or GE 120 or GE 303 or consent of the Instructor

Study of the elements and controls of climate emphasizing their effect on man and the environment, and man's response to and modification of climate. The world distribution of climatic regions. Instrumentation and practice in observing, data, presentation and analysis.

GE 307 Management and Preservation of Natural Environment **3 crs.**

Prq.: Permission of the Instructor

This course is devoted to a detailed examination of the occurrence, exploitation and conservation of natural resources, including minerals, soils, water, forests, grasslands, fisheries, wildlife, recreation areas and scenery. Emphasis is placed on conservation in the United States.

GE 354 Field Methods in Urban Geography **3 crs.**

Prq.: GS 353

A geography analysis of local urban areas and their problems, and the application of concepts learned in GS 353. Hours arranged.

GE 361 Geography of Environmental Problems II **3 crs.**

Prq.: ES 100 or GE 100 or the consent of the Instructor

Environmental problems are considered in this course from the geographer's point of view, problems such as population densities and distribution, balanced land use and its philosophic, esthetic, and scientific basis, the circulation of goods and people, and a comparison of levels of development.

GE 363 Marketing and Locational Analysis **3 crs.**

Prq.: GS 362 or consent

Introduction of applied aspects of retailing/wholesaling, and the location of these facilities; the determination of primary and secondary markets; and focusing upon the locational attributes of industry.

GE 410 Urban Land Use Mapping **3 crs.**

Prq.: GS 353

The process of mapping urban land uses will be studied with emphasis placed on field work. A total of 90 contact hours working in the field and in an urban planning office is required of all students taking this course.

- GE 411 Energy and the Environment** 3 crs.
Prq.: Junior or Senior standing or consent of the Instructor
A survey of world energy resources and problems. Patterns of supply and demand and the environmental effects of various types of energy development and utilization.
- GE 412 Solar Energy** 3 crs.
Prq.: Junior or Senior standing in a science major or consent of the Instructor
This course concerns itself with the nature of solar energy, its measurement and distribution along with the factors affecting its availability on earth. Solar technology, collectors, storage and delivery systems will be studied and discussed as well as the relation of solar energy to the total energy problem and the environment.
- GE 418 Thematic Mapping (Advanced Cartography)** 3 crs.
Prq.: GE 216; also recommended are GE 217 and MA 110
This course will mainly deal with the type of maps commonly prepared in planning offices and environmental agencies. While the emphasis will be on cartography, students will gain some field experience in survey, and data gathering in addition to map design, compilation and drafting. One lecture and four laboratory hours weekly. Additional lab time may be required.
- GE 420 Principles of Urban and Regional Planning** 3 crs.
Prq. Consent of the Instructor and/or GS 353
An introduction to the process of planning which deals with the interrelationships of resources, facilities, activities, and people over time and space.
- GE 440 Field Research in Appalachia** 3 crs.
Prq.: GS 110, GE 100 or ES 100, or consent of Instructor
This course provides the field experience in understanding the interrelationships of social, economic, and physical factors in the Appalachian Region (usually taught in late spring or summer).
- GE 471 Seminar in Geography** 3 crs.
This historical development of methods and techniques used in geographic research. Preparation of a research paper on a problem selected from one of the subdivisions of geography. For senior Geography majors. Two periods weekly for three quarters.
- GE 474 Quantitative Geography** 2 crs.
Prq.: Consent of the Instructor
The use of statistical techniques, and computer and model building methodology to analyze various spatial phenomena.
- GE 497 Research in Geography** 3 crs.
Preparation of a research paper in Geography.
- GE 498 Internship in Urban and Regional Planning** 3-15 crs.
Prq.: Consent of the Department
Student internship in a local planning department or agency. The purpose of this internship is to provide a student with experience in various aspects of his planning interests.
- GE 499 Directed Study in Geography** 1-3 crs.
Prq.: Consent of the Department
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.
- GE 500 Planning the Urban Environment** 3 crs.
Philosophy and problems of urban and regional planning.

AVIATION SCIENCE

AS 101 Primary Flight I

1 credit

Prq.: This course consists of flight instruction and ground tutoring necessary for the student to accomplish his or her first solo flight. Lessons include elements of flight principles, pre-and-post flight procedures, taxiing and ground handling, use of flight controls, basic maneuvers, take-offs and landings. Introduction to aircraft systems, radio communications, and air traffic control procedures. One two hour lecture/demonstration period weekly for one quarter.

AS 102 Primary Flight II

1 credit

Prq.: AS 101. This course is a continuation of Primary Flight I, designed to prepare the student for solo cross-country flight. Lessons provide greater proficiency in maneuvers, stalls, take-offs and landings, and emergency procedures. Introduction to night flight, various types of VFR navigation and VOR tracing. Flight Planning, Cross-Country flying culminating in Solo-Cross Country. One two hour lecture/demonstration period weekly for one quarter.

AS 103 Primary Flight III

1 credit

Prq.: AS 102. Continuation of Primary Flight II with emphasis on cross-country navigation, flying, flight planning, and solo practice to gain proficiency in all basic maneuvers. Lessons include VFR radio and navigation control of aircraft solely by reference to instruments. Private Pilot qualifications complete. One two-hour lecture/demonstration period weekly for quarter.

AS 105 Air Science and Navigation I

2 credits

Part I of the Private Pilot Ground School. Topics include Basic Performance and Aerodynamics of the Airplane, Airplane Structure and Systems, Flight Control and Instruments, Weight and Balance, Airports, Communications, Air Traffic Control, Meteorology, and Federal Aviation Regulations. One three-hour lecture/demonstration period meeting weekly for a twelve-week period.

AS 106 Air Science and Navigation II

2 credits

Prq.: AS 105. Part II of the Private Pilot Ground School, leading to the FAA Private Pilot Written Examination. Topics include discussion of aeronautical charts, airspace, radio navigation including VOR, DME, ADF, Radar and Transponders, and the A.I.M. Use of the flight computer and cross-country flight planning and medical factors of flight. One three-hour lecture/demonstration period meeting weekly for a twelve-week period.

AS 130 Principles of Management

3 credits

The principles and techniques underlying the successful organization and management of business activities. This course combines the traditional analysis of management principles with the behavioral approach to case studies. The study includes the management functions of planning, organization, leadership, staffing control, and the decision-making process. Three lectures weekly.

AS 140 Human Resources Management

3 crs.

A study of the staffing, compensation systems, individual and group behavior, employee development, and human resource management systems. Three lectures weekly.

AS 201 Commercial Flight I

1 credit

Prq.: AS 103. This course is the first in the professional pilot training series. Lessons include a review of basic flight maneuvers, instruction and solo proficiency practice in advanced maneuvers, precision landings, take-off and landing techniques. Introduction to altitude instrument flying. One two-hour lecture/demonstration period weekly for one quarter.

AS 202 Commercial Flight II

3 crs.

Prq.: AS 201. Concentrated instruction and solo practice in precision flight maneuvers. Introduction to flight in complex aircraft, experience in night and cross-country flying. One six-hour lecture/demonstration period weekly for one quarter.

AS 203 Commercial Flight III

2 crs.

Prq.: AS 202. Review and practice of basic and advanced flight maneuvers. Concentrated instrument flight instruction including IFR navigation, use of VOR, ADF, localizer, holding patterns, flight planning, procedures and regulations. One four-hour lecture/demonstration period weekly for one quarter.

AS 204 Commercial Flight IV

2 crs.

Prq.: AS 203. Review and practice of precision maneuvers. Continued instrument flight instruction with emphasis on aircraft control, IFR flight planning, departure, enroute, holding, and arrival procedures, instrument approaches, IFR procedures and regulations. One four-hour lecture/demonstration weekly for one quarter.

AS 205 Commercial Flight V

1 credit

Prq.: AS 204, 211, 212. This course is the final stage of the Commercial-Instrument Series, consisting of a complete review of all commercial maneuvers, instrument flying techniques, procedures, and regulations. Course culminates in recommendation for the FAA Commercial/Instrument Flight Test. One two-hour lecture/demonstration period weekly for one quarter.

AS 211 Advanced Air Science and Navigation I

2 crs.

Prq.: AS 106. Part I of the Commercial-Instrument Pilot Ground School. Subject matter involves advanced treatment of the airplane systems, performance and control, the National Airspace System, Federal Aviation regulations, meteorology, radio navigation, and the physiology of flight. One four-hour lecture/demonstration period weekly for one quarter.

AS 212 Advanced Air Science and Navigation II

2 crs.

Prq.: AS 211. Part II of the Commercial-Instrument Pilot Ground School, leading to the FAA Commercial Pilot and Instrument Rating Written Exams. Topics include discussion of aircraft environmental control systems and commercial flight planning. Study of instrument flight charts, IFR departure, enroute, and approach procedures. FAR's, IFR Flight Planning. One four-hour lecture/demonstration period weekly for one quarter.

AS 301 Instructional Flight I

2 crs.

Prq.: AS 205. This course is the first stage of instruction to the Certified Flight Instructor Certification. Lessons include analysis of flight maneuvers, take-offs, landings, stalls, emergencies, procedures. Practice flight and ground instruction. Two two-hour lecture/demonstration periods weekly for one quarter.

AS 302 Instructional Flight II

1 cr.

Prq.: AS 301, 303 (may be taken concurrently). Continuation of Instructional Flight I. Lessons include analysis and practice instruction of advanced maneuvers, altitude instrument flying, considerations of night flight, aircraft performance and control, spins, cross-country flight and navigation. Certification by the FAA. One two-hour lecture/demonstration period weekly for one quarter.

AS 303 Principles of Flight Instruction

1 credit

Prq.: AS 205. This course is designed to provide aviation instructors with easily understood information on learning and teaching, and to relate this information to their task of conveying aeronautical knowledge and skills to students. Topics include aspects of human behavior, teaching methods and communication, evaluation and criticism, instructional planning, instructor characteristics and responsibilities. One two-hour lecture/demonstration period weekly for one quarter.

AS 305 Introduction to Aviation Management

3 crs.

Prq.: AS 130. Survey of general aviation industry; basics of aircraft operations; marketing of products and services; legal aspects; physical facilities; major concentration will be placed on management and administration of a fixed base operation, duties and responsibilities of the airport manager and managerial considerations in all areas of general aviation. Three lectures weekly.

AS 306 General Aviation Operations

3 crs.

Prq.: AS 305. This course is a combination of lecture and laboratory. Lectures deal with facilities, management finance, legal and insurance aspects of general aviation. Laboratory sessions focus on sales, line service, air taxi, and flight school. One or more field trips to General Aviation operations will be held. A semester project is required. One four-hour lecture/laboratory period weekly.

AS 307 Air Transportation

3 crs.

Prq.: AS 130. This course covers development, regulation and administration of air transportation, economic information on airlines, alternate transportation modes and their effect on air transportation, contemporary problems of route congestion, pollution aspects, terminal capacity, ground support, changing trends in air freight, and new developments in air transportation regulations. Three lectures weekly.

AS 308 Airline Operations

3 crs.

Prq.: AS 305. An in-depth study of U.S. air carrier operations. The economics, organization, and regulation of domestic air carriers are covered in detail. Field trips to the operational sites of major carriers. Air carrier training programs are explored in this course. Three lectures weekly.

AS 402 Insurance and Legal Aspects of Business Aviation

3 crs.

An in-depth study of U.S. and international laws governing aviation. A survey of appropriate risk management policies of aviation. The case method is employed to present practical applications of principles under consideration. Three lectures weekly.

AS 407 Marketing Management

3 crs.

Selling and pricing business aviation services and creative marketing strategy are studied in an analytical approach to advertising, sales force administration, promotion, distribution, retailing, logistics, wholesaling, product planning, price policies, market research, and consumer behavior. Three lectures weekly.

Department of Mathematics & Computer Science

Professor Murray Abramson, Chairperson

Professors: Hugo D'Alarcao, George Sethares

Associate Professors: Robert Bent, Zon-I Chang, Joseph Chiccarelli,

Walter Gleason, Frank Lambiase, Robert Lemos, Henry Mailloux,

Michael Makokian

Assistant Professors: Torben Lorenzen, Thomas Moore, Richard Quindley,

I. Philip Scalisi, Donald Simpson, Robert Sutherland

UNDERGRADUATE PROGRAMS

Bachelor of Arts/Bachelor of Science In Mathematics

Since mathematics is both a cultural and a technical field of study, the curriculum is planned with the following objectives:

- 1) to introduce students to mathematics as an important area of human thought;
- 2) to prepare students for careers in industry;
- 3) to prepare students planning to teach mathematics on the secondary level;
- 4) to serve the needs of students in fields which rely on mathematics, e.g., experimental sciences, social sciences, and elementary education;
- 5) to give preparation to students for graduate study in mathematics and related fields.

Bachelor of Arts/Bachelor of Science in Computer Science

This program provides a broad background in computer science and will serve as preparation for employment in computer applications or for graduate studies in the field.

The department participates in a number of multidisciplinary programs for students preparing for careers in medicine, dentistry, or oceanography. Additional information on these programs may be found in the section *Undergraduate Multidisciplinary and Pre-Professional Programs*.

Mathematics Major

All majors are required to take MA 101-102, MA 201-202, MA 301, MA 401 and one course in computer programming.

In addition to these requirements, elective courses are to be selected as follows:

1. For students preparing for careers in industry, a *minimum of five* courses must be taken from groups A, B, C, or D. The Department recommends a distribution as follows: two electives each from groups B and D and one elective from any of the four groups.
2. For students preparing for secondary school teaching careers, MA 200 is *required* and a *minimum of four* courses must be taken from groups A, B, C, or D. The Department recommends a distribution as follows: one elective each from groups A, B, and C and one elective from any of the four groups.
3. For students planning graduate study, MA 302 and MA 402 are strongly recommended.

Group A: MA 302, MA 303, MA 349, MA 406

Group B: MA 316, MA 317, MA 402, MA 415, MA 416, MA 417

Group C: MA 304, MA 325, MA 326, MA 408

Group D: MA 382, MA 399, MA 403, MA 412, MA 490

All majors must also successfully complete PH 243-244 and a one-year sequence of language study at the intermediate level, or its equivalent. A math major beginning a new foreign language is required to take only six hours of that language.

Students who are contemplating majoring in mathematics should be aware of the sequential nature of the course offerings. It is of prime importance that students consult with the Chairperson of the Department as soon as possible. This will enable them to plan their programs so that degree requirements may be completed within a four-year period.

Computer Science Major

All majors are required to take CS 101, CS 102, CS 201, CS 205, CS 210, CS 330, CS 340, and CS 350. At least four electives (12 semester hours) must be selected from CS 206, CS 211, CS 280, CS 325, CS 395, CS 400, CS 410, CS 420, CS 435, CS 480, MA 382 or MA 415.

All majors must also take MA 103, MA 104, MA 200, and a one-year sequence of language study at the intermediate level or its equivalent. A computer science major beginning a new foreign language is required to take only six hours of that language.

Mathematics Minor

A minimum of eighteen hours is required. The student must take:

- (1) MA 101-102 or MA 103-104 or MA 220
- (2) At least one course selected from MA 202 or MA 223; MA 214 or MA 301
- (3) At least three courses selected from MA 105, MA 107, MA 108, MA 110, MA 111, MA 214, MA 216, MA 223, MA 321, or any of the courses in the elective Groups A, B, C, D for mathematics majors.

No more than two courses selected from MA 101 through MA 108 inclusive may be used for the minor.

Computer Science Minor

CS 101, CS 102, CS 201, and three additional courses.

These three additional courses to be selected from the following list of courses:

MA 200, PH 392, and any other CS courses

Data Processing Minor

CS 101, CS 210, CS 211 and three additional CS courses

GRADUATE PROGRAM

Master of Arts in Teaching

The department offers a program leading to the degree of Master of Arts in Teaching with a concentration in mathematics, which is designed primarily to meet the varied needs of graduate students who are currently teaching or intend to teach at the secondary school level. Admission to the

graduate program requires a minimum of 18 credits of undergraduate mathematics or the approval of the Chairperson of the Department. All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. Degree requirements include a minimum of 12 appropriate graduate credits in designated areas of professional study (consult the Graduate School section of this catalogue), and a minimum of 18 appropriate graduate credits in mathematics (approved by the program advisor on the basis of the background, interests, and needs of the student).

The departmental offerings listed below include the following courses which may not be used in fulfillment of the department's M.A.T. degree requirements: any 100 and 200 level courses, MA 321, MA 354, MA 450, MA 492, MA 493, MA 499 and all CS courses.

COURSE OFFERINGS*

MATHEMATICS

MA 101-102 Calculus with Analytic Geometry I-II **4 crs. for each semester**

Inequalities, functions and their graphs, the line and linear inequalities, limits and continuity, differentiation of algebraic functions and applications. The definite integral and applications, analytic geometry of the conic sections, the trigonometric and exponential functions, parametric equations and polar coordinates, calculus of vectors in a plane. Required of all freshman candidates for a degree in Mathematics, Physics, or Chemistry. Open to other qualified freshmen with consent of the Department Chairperson.

MA 103-104 Mathematical Analysis I-II **3 crs. for each semester**

Sets, algebraic functions and their graphs, topics from algebra, trigonometric functions and analytic trigonometry, logarithmic and exponential functions, analytic geometry of the line and conic sections, differentiation and integration of algebraic functions and their applications. Required of all freshmen candidates for a degree in Biology or Earth Sciences.

MA 105 Topics in Mathematics **3 crs.**

Topics to be selected from: elementary logic, number theory, geometry, algebra and finite mathematics. Recommended for Liberal Arts majors.

MA 106 Fundamentals of Mathematics **3 crs.**

Linear and quadratic equations, functions and their graphs, trigonometry, analytic geometry of the straight line and conic sections.

MA 107-108 College Mathematics for Elementary Majors I-II **3 crs. for each semester**

Theory of sets, relations and their properties, systems of numeration, axiomatic approach to the real number system through a study of the integers and rational numbers, elementary number theory, nonmetric and analytic geometry, groups, linear equations and inequalities, probability.

MA 110 Elementary Statistics I **3 crs.**

Variance, covariance, linear correlation, general regression lines, introduction to sampling theory; and the following distributions: normal, t, chi-square, and F.

MA 111 Elementary Statistics II **3 crs.**

Prq.: MA 110

The continuation of topics in MA 110. The College's computer facilities may be used in the course.

MA 200 Probability and Statistics **3 crs.**

Prq.: CS 101

Basic concepts in probability and statistics including sample spaces, random variables, binomial and other probability distributions, method of least squares, estimation of parameters, goodness of fit tests, and sampling. The emphasis will be on the results of probability and statistics as useful tools for the computer science student.

*See page 83 for general information regarding course offerings.

MA 201 Calculus with Analytic Geometry III **4 crs.**

Prq.: MA 102

Methods of integration and applications, solid analytic geometry, calculus of vectors in space, elements of infinite series, partial differentiation, multiple integration.

MA 202 Linear Algebra **4 crs.**

Vectors, spaces, linear transformations, and matrices.

MA 214 Introduction to Modern Algebra **3 crs.**

Prq.: MA 105 or MA 106 or MA 108 or permission of the Department

Linear congruences, groups, matrices, and linear systems.

MA 216 Analytic Geometry **3 crs.**

Prq.: MA 105 or MA 106 or MA 108 or permission of the Department

Trigonometric functions and analytic trigonometry, analytic geometry of the straight line and conic sections.

MA 220 Introduction to Calculus **3 crs.**

Prq.: MA 105 or MA 106 or MA 108 or permission of the Department

Functions and limits, derivatives and antiderivatives; the definite integral, differentiation of algebraic and transcendental functions, applications. Mathematics elective for non-science majors.

MA 223 Introduction to Linear Algebra **3 crs.**

Prq.: MA 105 or MA 106 or MA 108 or permission of the Department.

Matrices, determinants, vectors, systems of linear equations.

MA 230 Business Mathematics **3 crs.**

The mathematics of: financial planning, simple and compound interest, discount (simple, trade, and commercial), depreciation, government revenue collecting, installment payment plans, annuities, amortization of debts, sinking funds. An introduction to statistics, probability and stocks and bonds.

MA 301 Abstract Algebra I **3 crs.**

Prq.: Permission of the Department

Introduction to the theory of rings, integral domains and fields through a study of integers, rational numbers, real numbers, complex numbers and polynomial; elementary group theory.

MA 302 Abstract Algebra II **3 crs.**

Prq.: MA 301

Group theory, linear groups, rings and ideals, extensions of rings and fields.

MA 303 Number Theory **3 crs.**

Prq.: Permission of the Department

Development of the number system, the Euclidean Algorithm and its consequences, theory of congruences, number-theoretic functions, Diophantine equations, quadratic residues.

MA 304 Higher Geometry **3 crs.**

Prq.: Permission of the Department

Axiomatic systems, finite geometries, introduction to synthetic and analytic projective geometry, affine geometry, non-Euclidean geometry.

MA 316 Differential Equations **3 crs.**

Prq.: MA 201

Ordinary differential equations of first and second order, linear differential equations with constant coefficients, the Laplace transformation, applications.

MA 317 Sequences and Series

3 crs.

Prq.: MA 201

Elementary point-set theory, Heine-Borel theorem, Cauchy sequences, convergence tests for infinite series, absolute convergence, power series, Taylor series and Fourier series.

MA 321 Introduction to Probability

3 crs.

Prq.: MA 105 or MA 106 or MA 108 or permission of the Department

Permutations and combinations, finite sample spaces, random variables, binomial distributions, statistical applications.

MA 325 Foundations of Geometry

3 crs.

Prq.: Permission of the Department

A study of axiomatic systems, finite geometries, axiomatic Euclidean geometry, various non-Euclidean geometries, Klein's Erlangen program, transformation groups, invariant properties.

MA 326 Projective Geometry

3 crs.

Prq.: Permission of the Department

The principle of duality, perspectivity, projectivity, harmonic sets, cross ratio, transformation groups, projective theory of conics.

MA 349 Foundations of Mathematics

3 crs.

Prq.: Permission of the Department

Elements of set theory and logic, development of the basic number systems, Peano postulates, development of the natural numbers, the integers and rational numbers, real numbers, and Cauchy sequences.

MA 354 Introduction to Modern Geometry

3 crs.

Prq.: MA 107

Plane geometric figures, curves and surfaces, congruence, measures, coordinate geometry, parallelism and similarity, non-Euclidean geometries.

MA 382 Switching Theory

3 crs.

Prq.: MA 301 and CS 101

Boolean algebra and functions. Combinational and sequential logic nets, threshold logic, minimization theory, completeness theorems. Introduction to Automata theory.

MA 399 Topics in Advanced Mathematics

3 crs.

Special topics selected from the general areas of algebra, analysis, and applied mathematics.

MA 401 Advanced Calculus I

3 crs.

Prq.: MA 201

Fundamental theorems on limits and continuity, properties of derivatives, functions of several variables, partial derivatives, multiple integrals.

MA 402 Advanced Calculus II

3 crs.

Prq.: MA 401 or permission of the Department

Sequences, infinite series, power series and expansions of functions, vector calculus. May be offered as a quarter or semester course.

MA 403 Probability Theory

3 crs.

Prq.: MA 201

Permutations and combinations, calculus of probabilities, discrete and continuous random variables, expectation, elementary probability distributions, moment-generating functions, samples spaces.

MA 406 Theory of Sets and Elementary Logic **3 crs.**

Prq.: Permission of the Department

Truth tables, rules of inference, method of proof, the algebra of sets and graphs of functions, cardinal numbers. May be offered as a quarter or semester course.

MA 408 History of Mathematics **3 crs.**

Prq.: Permission of the Department

The development of elementary mathematics from ancient to modern time.

MA 412 Mathematical Statistics **3 crs.**

Prq.: MA 201 or permission of the Department

Fundamental statistical methods, tests of significance and estimation based on large or small samples, simple correlation, linear regression, statistical inference, sequential analysis.

MA 415 Numerical Analysis **3 crs.**

Prq.: MA 201

Solution of algebraic and transcendental equations, general iteration method, Newton-Raphson method. Approximation of functions and curve fitting, Lagrange interpolation formula, Newton's forward difference method, method of least squares, orthogonality. Numerical integration, Euler-Cauchy technique.

MA 416 Applied Mathematics **3 crs.**

Prq.: MA 316 or permission of the Department

Fourier analysis, numerical solutions of ordinary and partial differential equations, integral equations, special functions.

MA 417 Vector Analysis **3 crs.**

Prq.: MA 201

Elementary set theory, vector space theory, inner product spaces, vector algebra, vector differential calculus, differential invariants, integral vector calculus, Stoke's theorem.

MA 450 Topics in Mathematics for Elementary School Teachers **3 crs.**

Prq.: MA 107

Equations and inequalities; point-set geometry; analytic geometry; measurement (including the metric system); introduction to computer science.

MA 490 Mathematics Seminar **3 crs.**

Prq.: MA 201, MA 202, and MA 301 or permission of the Department

Topics to be selected from algebra, geometry, and analysis. May be offered as a quarter or semester course.

MA 492 Statistics with Computer Programming I **3 crs.**

Prq.: Permission of the Department

Those topics covered will include: the mean, the median, variance, standard deviation, Pearson correlation coefficient, Spearman rank correlation coefficient, lines of regression, central limit theorem, and confidence intervals for the population mean. There will be an introduction to digital computers and computer programming with applications to statistical problems.

MA 493 Statistics with Computer Programming II **3 crs.**

Prq.: MA 492

Among those topics covered will be hypothesis-testing, small and large sampling theory, Chi-square analysis, and one-way analysis of variance. There will be a continuation of the topics in computer programming.

MA 499 Directed Study in Mathematics

1-3 crs.

Prq.: Permission of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

MA 502 Research

credit to be arranged

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

MA 503 Directed Study

credit to be arranged

Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

MA 507 Topology

3 crs.

Prq.: MA 201 and MA 301 or equivalent

Elements of point set topology, closed sets and open sets in metric spaces, continuous mappings, connection, separation theorems, and compactness.

MA 510 Group Theory

3 crs.

Prq.: MA 301 or equivalent

Groups, subgroups, homomorphisms, normal subgroups and quotient groups, generators, normal structure and the Jordan-Hölder Theorem, direct products of groups.

MA 511 Ring Theory

3 crs.

Prq.: MA 301 or equivalent

Examples of rings, ideals and homomorphisms, the Jacobson radical, direct sums, Boolean rings, rings with chain conditions.

MA 518 Topics in Analysis

3 crs.

Prq.: MA 401 or permission of the Department

Heine-Borel Theorem, Bolzano-Weierstrass Theorem, topology of the real line, sequences of functions, uniformly continuous functions.

MA 520 Real Analysis

3 crs.

Prq.: MA 401

Sets and functions, sequences and series, metric spaces, Weierstrass Approximation Theorem, Riemann and Lebesgue Integrals, Fourier Series.

MA 522 Complex Function Theory

3 crs.

Prq.: MA 401

Analytic functions of a complex variable, differentiation and integration in the complex plane. Cauchy's theorems, infinite series. Laurent expansions, theory of residues.

COMPUTER SCIENCE

CS 100 Introduction to Computer Science

3 crs.

For non-science majors. Computer organization and software. Programming in BASIC. Solution of simple arithmetic and algebraic problems. Elementary data processing techniques. A survey of computer applications in the social sciences and humanities. Only one of the following may be offered for credit: CS 100, CS 101.

CS 101 Computer Science I

3 crs.

A first course in programming. Introductory concepts of computer organization. Problem solving methods and algorithmic development stressing good programming style and documentation. Only one of the following may be offered for credit: CS 100, CS 101.

CS 102 Computer Science II

3 crs.

Advanced programming techniques. Introduction to basic aspects of recursion. In core search and sort methods, simple data structures, subroutines and parameters, and algorithmic analysis. Techniques of algorithmic development and programming will be stressed. The emphasis on good programming style and documentation begun in CS 101 will be continued.

CS 201 Assembly Language Programming

3 crs.

Prq.: CS 102

An introduction to computer architecture and programming systems. Assembly language programming concepts and techniques as they apply to a broad range of computers. The course will emphasize a real computer, such as the PDP/8-I or the H-8 microcomputer system, as opposed to a hypothetical machine.

CS 205 Discrete Structures in Computer Science

3 crs.

Prq.: CS 102

This course stressed mathematical concepts commonly applied to algorithmic analysis and data structures. Topics include logic, set theory, inductive definitions and proofs, counting techniques, effective algebraic structures, algebraic flowchart language, structured algorithms, analysis of algorithms, graphs and digraphs, tree structures, and decision trees.

CS 206 Introduction to Computer Organization

3 crs.

Prq.: CS 102

Organization and structuring of the major hardware components of computers. Mechanics of information transfer and control within a digital computer system. Fundamentals of logic design. The major emphasis of the course concerns the functions of and communication between the large scale components of a computer system, including properties of I/O devices, controllers, and interrupts.

CS 210 COBOL Programming I

3 crs.

Complete coverage of the COBOL language. Introductory concepts and techniques of structuring data on bulk storage devices. Applications of file processing techniques. Emphasis will be placed on the writing and documentation of programs to be read by others. Introduction to data base management systems.

CS 211 COBOL Programming II

3 crs.

Prq.: CS 210

A continuation of topics in CS 210.

CS 280 Fundamentals of Microprocessors and Microcomputers

4 crs.

Introduction to the binary system, base conversions from decimal to octal, hexadecimal and binary. Use of various gates in building computers and registers. Components of a microcomputer, encoders, decoders, registers, ROM's, RAM's and PLA's. Programming in machine language and OP codes, addressing modes, debugging techniques. Interfacing with peripherals, serial and parallel transmission, maskable and nonmaskable interrupts. A project will be assigned which involves interfacing a microcomputer to an instrument or transducer of some kind.

CS 325 Programming Language Laboratory

1-3 crs.

Prq.: CS 102 and permission of the Department

A specific programming language such as APL, PASCAL, LISP, PL/1 will be covered with each offering of this course. The course may be taken for repeated credit.

CS 330 Data Structures and Algorithms

3 crs.

Prq.: CS 102

Static, semistatic, and dynamic data structures. Techniques for the analysis and design of efficient algorithms which act on data structures. Topics will include arrays, records, stacks, queues, dequeues, linked lists, trees, graphs, sorting and searching algorithms, algorithms for insertion and deletion, and the analysis and comparison of algorithms.

CS 340 Organization of Programming Languages

3 crs.

Prq.: CS 201, CS 210

Formal study of programming language specification and the comparison of programming languages, especially the run-time behavior of programs. Topics include syntax and basic characteristics of grammars, language constructs for program control and data storage management, and an overview of compilers and interpreters. This course continues the development of problem solution and programming skills introduced in earlier programming courses.

CS 350 Operating Systems and Computer Architecture

3 crs.

Prq.: CS 201

The organization and architecture of computer systems at the register-transfer and programming levels of system description. Fundamental principles of operating systems and the inter-relationships between operating systems and computer architecture.

CS 395 Computer Science Seminar

3 crs.

Prq.: A minimum of 24 approved hours in computer science and permission of the Department. Interdisciplinary uses of computers. Problems arising through the increasing use of computers in our society. Seminar will be project oriented and students will present their work to the class for discussion and criticism.

CS 410 Data Processing Applications

3 crs.

Prq.: Two computer courses including COBOL I

A survey of data processing applications of the computer. Students will be assigned large scale projects in such areas as business and public administration.

CS 420 Minicomputer Laboratory

3 crs.

Prq.: CS 350

Integrated hardware/software systems design. This is a project oriented course. Students work as teams participating in all phases of a major development project including system specification, subtask descriptions, scheduling, procurement, alternative design evaluation, subsystem development, and system integration.

CS 435 Analysis of Algorithms

3 crs.

Prq.: CS 330

General overview of algorithms. Algorithmic techniques needed in problem solving. Relative efficiency of algorithms. Topics will include efficient algorithms for data manipulation, graphical analysis, rapid evaluation of algebraic functions and matrix operations, and $N \log N$ bound in sorting algorithms.

CS 480 Survey of Programming Languages

3 crs.

Prq.: CS 340

An overview of selected major programming languages and characteristics that make these languages appropriate for particular classes of problems. The course will contain a brief review of BASIC, FORTRAN, and COBOL and also of other languages such as PASCAL, ALGOL, PL/1, LISP, APL, SNOBOL, GPSS, and SIMSCRIPT. Programming projects in the languages studied is an important part of this course.

CS 498 Internship in Computer Science

3-15 crs.

Prq.: A minimum of 24 approved hours in computer science and permission of the Department
Students will work for an employer in the computer science field for a minimum of 20 hours/week during one full semester. A member of the Department will serve as advisor and evaluator of all work projects.

CS 499 Directed Study in Computer Science

1-3 crs.

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

Department of Physics

Professor Richard F. Calusdian, Chairperson
Professors: Felix S. Palubinskas, George A. Weygand
Associate Professor: Raymond L. Blanchard

The Department of Physics strives to provide students with the necessary skills and knowledge to pursue successful careers in research, teaching, or further study in graduate programs. Programs in physics culminating in the degrees of Bachelor of Arts, Bachelor of Science, and Master of Arts in Teaching are offered.

UNDERGRADUATE PROGRAMS

Bachelor of Arts/Bachelor of Science

The Department of Physics offers a program leading to the Bachelor's degree in Physics. This program is sufficiently flexible to prepare a student for graduate school, industry, or secondary school teaching. Each student can plan a physics program with the help of a faculty advisor, to meet specific future needs.

Students who are contemplating majoring in this department should be aware of the sequential nature of the course offerings. It is of prime importance that such students consult with the Chairperson of the Department as soon as possible. This will enable them to plan their programs so that degree requirements may be completed within a four-year period.

The department participate in a number of multidisciplinary programs for students preparing for careers in medicine, dentistry, or oceanography. Additional information on these programs may be found under *Undergraduate Multidisciplinary and Pre-Professional Programs*.

Physics Major

PH 243-244, 375 or 385, 387, 388, 389, 403; CH 141-142; MA 101-102, 201, 316 or their equivalent; a one-year sequence in foreign language at the intermediate level, or its equivalent.

Physics Minor

18 credits in Physics acceptable for the physics major.

Physical Science Minor

18 credits in Physics and Chemistry..

GRADUATE PROGRAM

Master of Arts in Teaching

The Department of Physics offers programs leading to the degree of Master of Arts in Teaching with concentrations in physics and physical sciences. These programs are designed primarily to meet the varied needs of graduate students who are currently teaching or intend to teach at the secondary school level. They also provide a foundation for further graduate work in either of these areas. All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. Degree requirements include a minimum of 12 appropriate graduate credits in designated areas of professional study (consult M.A.T. degree requirements in the Graduate School section of this catalogue), and a minimum of 18 appropriate graduate credits in physics (approved by the program advisor on the basis of the background, interests, and needs of the student).

The departmental offerings listed below include the following courses which may not be taken for graduate credit: all physics courses at the 100 level, PH 200, PH 202, PH 270, PH 301, PH 390, PH 499.

COURSE OFFERINGS*

PH 104 Physical Science for the Elementary School I - Physical Aspects **3 crs.**

A survey of the physical science concepts included in the elementary school curricula. Content is based upon science materials in several national elementary science curricula including, ESS, SCIS, SAPA, Health and others. Two lecture periods and one two-hour laboratory weekly.

PH 110 Physics for Nurses **3 crs.**

Survey of Mechanics, fluid flow, heat, light, electricity and magnetism with applications relevant to students in nursing programs.

PH 181 Elements of Physics I **3 crs.**

Principles of mechanics, heat and sound. Two lecture periods and one two-hour laboratory period weekly.

PH 182 Elements of Physics II **3 crs.**

Prq.: PH 181

Principles of electricity, magnetism, optics and modern physics. Two lecture periods and one two-hour laboratory period weekly.

PH 200 Survey of Physics **3 crs.**

Elements of mechanics, heat, electricity, magnetism, optics and modern physics. Two lecture periods and one two-hour laboratory period weekly.

PH 202 Modern Physics for the Humanist **3 crs.**

A study of 20th century man's attempts to understand the laws of nature and his relations to them. Among the topics to be considered are the theory of relativity, elementary particles, nuclear physics and the Manhattan project, quantum theory applications to philosophy and technology.

PH 243 General Physics I **4 crs.**

Prq.: MA 101 or permission of the Department

Calculus based study of mechanics and heat. Three lecture periods and one three-hour laboratory period weekly.

PH 244 General Physics II **4 crs.**

Prq.: PH 243

Calculus based study of electricity, magnetism and light. Three lecture periods and one three-hour laboratory period weekly.

PH 270 Transportation for the Future — Physical Implications **3 crs.**

Elements of transportation theory, physical principles and energy considerations. Modern and future vehicle design. Transport systems involving automobiles, monorails, air cushion and air film vehicles, composite and hybrid systems, hydrofoils, hover craft. Future developments in cars, airplanes, ships.

PH 280 Energy and Its Social Uses **3 crs.**

Energy sources, transmission and consumption of power. Mechanical and electrical energy, solar, wind, hydro-electric, fossil fuel energy versus nuclear energy, fission and fusion energy. Thermodynamic principles and applications. Geothermal energy. Relative efficiencies, entropy and waste energy. Thermal pollution and global equilibrium. Economics of energy.

*See page 83 for general information regarding course offerings.

PH 301 Physics of Sports **3 crs.**

Prq.: Six credits in the natural sciences

A review of required mathematics; the theory and application of classical mechanics to sports. This includes kinematics, dynamics, momentum, work energy, hydrodynamics, and aerodynamics.

PH 371 Biophysics, Macroscopic Aspects **3 crs.**

Prq.: Consent of the Instructor

The structure, function and control of the skeletal, muscular, nervous, blood-vascular and other body systems of the human being on the macroscopic or large-system level. Three lecture periods weekly.

PH 372 Biophysics, Microscopic Aspects **3 crs.**

Prq.: Consent of the Instructor

The structure, function and control of the human body on the microscopic or molecular level. May be taken independently of PH 371.

PH 375 Wave Theory **3 crs.**

Prq.: PH 244, MA 201 or equivalent

The mathematics of wave motion; electromagnetic theory and applications to reflection and refraction; superposition of waves; interference and diffraction; Fourier Optics.

PH 376 Electronic Circuits **3 crs.**

Prq.: PH 182 or PH 244 or permission of the Department

Circuit analysis: Matrix methods, transform methods, amplifiers, feedback theory, operational amplifiers, integrated circuits, analog computers. Three lecture periods and one three-hour laboratory weekly.

PH 381 Thermal Physics **3 crs.**

Prq.: PH 243, PH 244

Thermodynamics; kinetic theory; and statistical mechanics.

PH 385 Optics **3 crs.**

Prq.: PH 244

Study of geometrical and physical optics. Three lecture periods weekly.

PH 387 Modern Physics **3 crs.**

Prq.: PH 243, PH 244

Theory of relativity; atomic structure; quantum theory; nuclear physics and elementary particles.

PH 388 Electricity and Magnetism **4 crs.**

Prq.: PH 244

The theory and applications of the fundamental equations of electromagnetism. Three lecture periods and one three-hour laboratory weekly.

PH 389 Mechanics **3 crs.**

Prq.: PH 243

Vector treatment of forces, torques; dynamics of particles and rigid bodies; work and energy; momentum; small oscillation theory; Lagrangian and Hamiltonian formulation of dynamics.

PH 390 Research Problems in Physics **credit to be arranged**

Special projects for advanced student desiring individual instruction in the methods of physics research. Hours arranged.

PH 391 Solid State Physics **3 crs.**

Prq.: PH 387

Crystal structure, electric, magnetic and thermal properties of matter; transport properties; band theory; super conductivity.

PH 392 Digital Electronics **4 crs.**

Prq.: College-level course in physics or permission of the Instructor

Elements of digital electronics: Boolean algebra of switching circuits, binary logic circuits, digital computer logic circuits. Three lecture periods and one three-hour laboratory weekly.

PH 393 Special Topics in Modern Physics **3 crs.**

Prq.: PH 387

Topics to be chosen from among the areas of the theory of relativity. Quantum mechanics, Solid State and Nuclear Physics.

PH 399 Experimental Physics **credit to be arranged**

Introduction to advanced experimental techniques of physics.

PH 402 Quantum Mechanics **3 crs.**

Prq.: PH 403

Wave nature of matter; the Schrodinger equation; application of the Schrodinger equation to the electron, the hydrogen atom, multi-electron atoms and radiation.

PH 403 Mathematical Physics **3 crs.**

Prq.: PH 243, PH 244, MA 201

Vector analysis; matrices, linear differential equations; Sturm-Liouville theory; Fourier series; orthogonal functions; Laplace transform.

PH 404 Methods of Mathematical Physics **3 crs.**

Prq.: PH 403

Application to physics of topics selected from group theory, generalized functions. Green's functions, complex variable theory, calculus of variations, and tensor analysis.

PH 405 Nuclear Physics **3 crs.**

Prq.: PH 387

Nuclear forces, nuclear models, nuclear reactions and radioactivity, and elementary particles.

PH 408 Astrophysics **3 crs.**

Prq.: PH 387 or permission of the Instructor

Stellar atmospheres and interiors; generation and transport of energy; stellar evolution, pulsars, blackholes and quasars; galactic structure; cosmology.

PH 409 Theory of Relativity **3 crs.**

Prq.: PH 387

The Lorentz Transformation and application to mechanics and electrodynamics; the general Theory of Relativity and application to astrophysics.

PH 410 Electrodynamics **3 crs.**

Prq.: PH 388

Maxwell's equations in vacuo and material media. Electromagnetic waves.

PH 411 Procedures in Experimental Physics I **4 crs.**

Prq.: PH 244

Materials of experimental physics, laboratory techniques, instrumentation, analysis of measurements.

PH 412 Procedures in Experimental Physics II **4 crs.**

Prq.: PH 411

Materials of experimental physics, laboratory techniques, instrumentation, analysis of measurements.

PH 499 Directed Study in Physics

1-3 crs.

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

PH 502 Research

credit to be arranged

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

PH 503 Directed Study

credit to be arranged

Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

PH 581 The Physics of the Environment

3 crs.

Prq.: Permission of the Instructor

The generation and utilization of energy and their environmental impact. Energy sources included are Solar, Wind, Hydroelectric, Nuclear, Geothermal, Fusion.

PH 583 Physics of the Atom

3 crs.

Prq.: Permission of the Instructor

A study of the atomic view of matter and radiation. Topics included are: the kinetic theory of gases, theory of the electron, Bohr's theory of the atom, many electron atoms, theory of molecules and spectra, and the theory of relativity.

PH 584 Physics of the Nucleus and Elementary Particles

3 crs.

Prq.: Permission of the Instructor

A study of the nucleus and relationship of elementary particles. The topics included are: nuclear structure, radioactivity, nuclear reactions, nuclear accelerators, conservation laws, symmetry and invariance principles, unified view of the elementary particles, and cosmic rays.

PH 585 Physics of the Solid State

3 crs.

Prq.: Permission of the Instructor

A unified treatment of the basic models used to describe solid state phenomena. Topics included are: crystal structure, electric, magnetic, and thermal properties of matter, transport properties of metals and semi-conductors; band theory; super conductivity.

PH 587 Radiation Physics I

3 crs.

Prq.: Permission of the Instructor

Wave propagation and the electromagnetic spectrum, interference, polarization, coherence theory, electromagnetic theory.

PH 588 Radiation Physics II

3 crs.

Prq.: Permission of the Instructor

Blackbody radiation, photo-electric effect, the Bohr Model of the Atom and Atomic Spectra, the Schrodinger equation and applications to radiation problems.

PH 589 Physics of the Solar System

3 crs.

Prq.: Permission of the Instructor

Physical properties and motion of the members of the Solar System and interplanetary medium.

PH 593 Special Topics in Secondary School Science

3 crs.

Prq.: Permission of the Instructor

An introduction to the environmental and energy-related physical science topics presented in the Secondary School Science curricula. Special emphasis will be placed upon the science content found in these curricula materials. Lectures, seminars, laboratory work, workshops and model classes will be included in this course.

PH 594 Special Topics in Junior High Science I

6 crs.

Prq.: Permission of the Instructor

An introduction to the Junior High School science programs developed by the Princeton Project and by the Educational Research Council of America. Lectures, laboratory work, model classes, and field trips will be included in this course.

PH 595 Special Topics in Junior High Science II

3 crs.

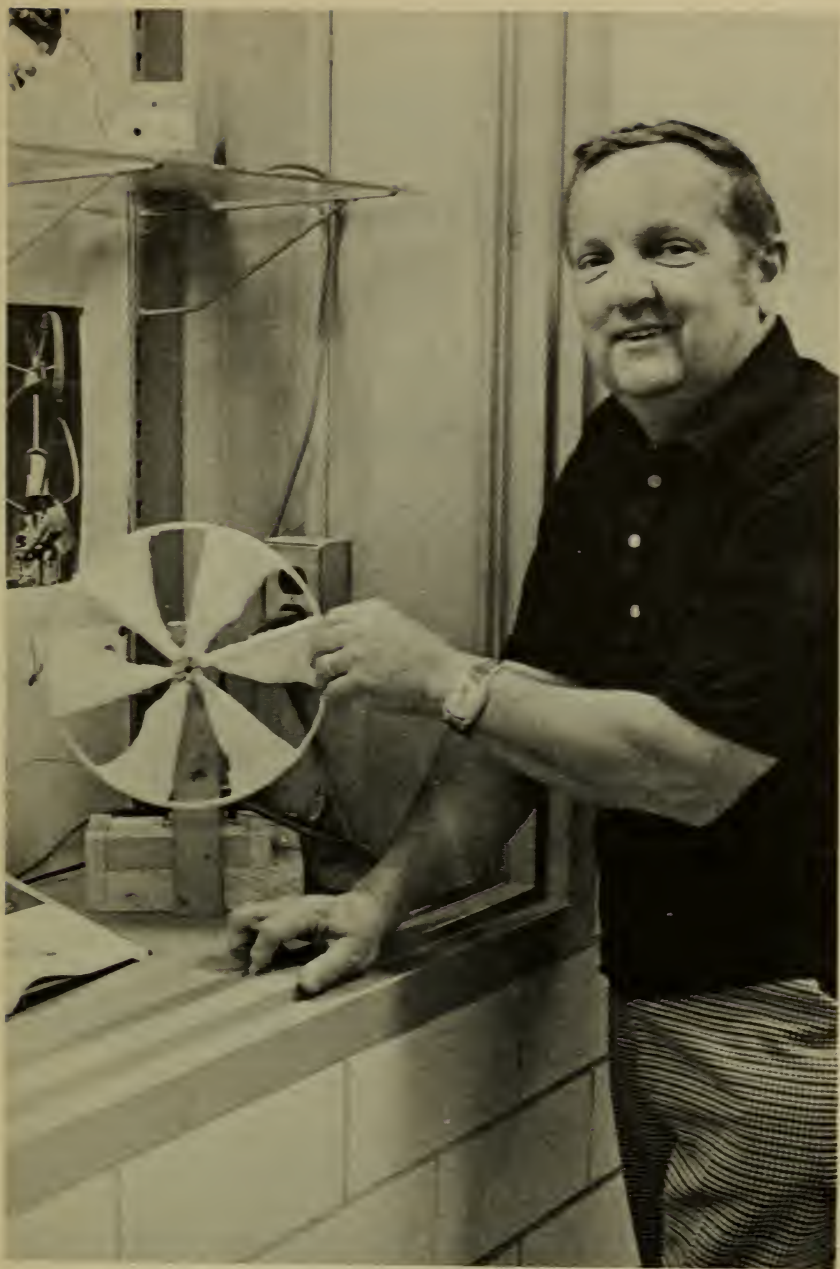
A continuation of the course PH 594 in which the Princeton Project and the Educational Research Council's Junior High science programs are studied and evaluated.

PH 597 Special Topics in Elementary Science

3 crs.

Prq.: Permission of the Instructor

An introduction to the elementary science materials developed by the Science Curriculum Improvement Study and others. Special emphasis will be placed upon the study of the science content included in these materials. Lectures, laboratory work, seminars, workshops, and model classes will be included in this course.



Division of Professional Education

**Educational Services,
Elementary and
Early Childhood Education,
Health, Physical Education,
and Recreation,
High School, Middle School,
and Adult Education,
Media and Librarianship,
Counseling,
School Administration
CAGS in Education**

Division Head: Dr. Ray Harper

The Division of Professional Education consists of the Departments of Educational Services; Elementary and Early Childhood Education; Health, Physical Education, and Recreation; High School, Middle School, and Adult Education; and Media and Librarianship; the Committees for Counseling and for School Administration; the Burnell Campus School; and the Office of Student Teaching and Certification.

Through its departments and committees the Division offers undergraduate and graduate programs for the professional preparation of

early childhood, elementary, and high school teachers, as well as for specialized positions in school and community-based organizations and agencies. The Division also provides service to the schools, community organizations, and agencies of the region.

The Burnell Campus School provides education majors with practical experiences which complement the theoretical background available in more formal study. Extensive field experiences in schools and agencies off campus further contribute to the development of meaningful linkages between study and practice.

Application for admission to the Teacher Education Program, to student teaching, and for Massachusetts certification are made through the Office of the Division of Professional Education.

Students following the curricula leading to the Bachelor of Science in Education, when admitted to the Teacher Education Program, are prepared for teaching in pre-school centers or in elementary schools, either as mainstream or special needs teachers, or in physical education. Students majoring in most of the curricula leading to a Bachelor of Arts or Bachelor of Science may minor in High School Education and, when admitted to the Teacher Education Program, are prepared for high school teaching. Graduate degree students seeking teacher certification are eligible for student teaching only after completing a minimum number of applicable program credits and after applying for and being admitted to the Teacher Education Program

Undergraduate curricula offering degree, and/or minor programs are:

Majors in . . .

- Early Childhood Education
- Elementary Education*
- Physical Education*
- Special Education

Minors in . . .

- Health
- Instructional Media
- Library Science
- High School Education with majors in . . .

Anthropology	French*
Art	Geography
Biology*	History*
Chemistry*	Mathematics*
Communication Arts	Physics
and Sciences*	Psychology
Earth Sciences*	Sociology
English*	Spanish

*Program has been approved under the Interstate Certification Compact for certification reciprocity with 30 other states. Programs are scheduled for review in November, 1981, and their status regarding reciprocity may be subject to change.

Baccalaureate degree programs having the above majors or minors have been designed to satisfy the new requirements for appropriate Massachusetts teaching certificates, and meet certification requirements of many other states through either reciprocity agreements with those states or transcript evaluation.

Graduate curricula leading to the master's degree and Certificate of Advanced Graduate Study (CAGS) are offered in the following fields:

<i>Graduate Program</i>	<i>Consult Department of . . .</i>
Master of Arts in Teaching	High School, Middle School, and Adult Education (in conjunction with most of the departments outside of Education)
Master of Education in Special Education	Educational Services
Early Childhood Education	Elementary and Early Childhood Education
Elementary Education	
Elementary School Mathematics	
Reading	
Health Science	Health, Physical Education and Recreation
Instructional Media	Media and Librarianship
School Librarianship	
Counseling	A description of these Divisional programs follows the Department of Media and Librarianship
School Administration	
Master of Science in Physical Education	Health, Physical Education and Recreation
Certificate of Advanced Graduate Study (CAGS) in Education	Information about this Divisional program follows the Department of Media and Librarianship

ADMISSION TO THE TEACHER EDUCATION PROGRAM

The programs in professional education are designed as a series of experiences encompassing theoretical knowledge as well as its practical application through a sequence of field experiences culminating in student teaching. The goal of the program is the graduation of students with outstanding qualifications for teaching or related fields.

All undergraduate and graduate students preparing to teach and whose programs include student teaching and qualifying for teacher certification, must formally apply for, satisfy all selection criteria, and be admitted to a Teacher Education Program. After admission to a program, the student must qualify for retention and for admission to the Student Teaching Practicum by maintaining a status of good standing in relation to the admission criteria and also must satisfy additional criteria, if any, established by his or her respective program. Students must retain the admission criteria and also satisfy additional criteria, if any, established by departments for admission to the student teaching practicum and recommendation for certification.

The following requirements and criteria for admission to a Teacher Education Program and for admission to the Student Teaching Practicum have been established by the Teacher Preparation Committee and must be fulfilled by *all* students preparing to teach.

1. The Applicant must submit a medical form completed and signed by a physician to the College Health Service before matriculating.
2. For compliance with area school policies and with the provisions of Chapter 71, Section 55B of the Acts of 1974 — TB exams for school personnel — the applicant must secure a tuberculin skin test or chest x-ray before working with children in the schools. This is a requirement for an introduction to education course (ED 220, ED 221, EE 220 or EE 230) or any other pre-student teaching field experience, as well as student teaching. The applicant must submit the result to the College Health Office.
3. The **undergraduate applicant** for a Teacher Education Program must make formal application. The necessary form may be obtained from either the Office of the Division of Professional Education, Burrill Academic Building, from the appropriate education departments, or, while enrolled in an introduction to education course (ED 220, ED 221, EE 220 or EE 230), from the instructor of the course. The deadline for submitting a completed application to the Division Office, Burrill Academic Building, is February 1 of the sophomore year, or for the *transfer student* who has completed the sophomore year elsewhere, before the end of his or her first month of classes at Bridgewater State College.

The **undergraduate student in the Program of Continuing Education**, who is an applicant for a Teacher Education Program, must make formal application by obtaining the necessary form from the Division Office, Burrill Academic Building. The deadline for submitting a completed application to the Division Office, Burrill Academic Building, is February 1 of the last semester of sophomore status.

The **graduate student** who is an applicant for a Teacher Education Program must obtain the necessary application form from the Office of the Division of Professional Education, Burrill Academic Building. The deadline for submitting a completed application to the Division Office, Burrill Academic Building, is, for Fall placement, February 1 of the academic year prior to the year in which the Student Teaching eligibility will be certified by the Office of the Graduate School (see below); and September 30 for Spring placement.

4. Admission into an **undergraduate** Teacher Education Program becomes effective when the applicant has been certified as having satisfied all of the admission criteria, but no earlier than at the end of the student's sophomore year.
 - a. The following criteria have been established as minimum criteria for admission and retention in a Teacher Education Program.
 - 1) The undergraduate applicant must be a matriculated student at the College with a minimum Q.P.A. of 2.2.
 - 2) All entering freshmen and transfer students are required to submit a medical form completed by an appropriate physician. This includes a record of a tuberculin test and/or chest x-ray. A statement confirming that the applicant has met this criterion is sent by the College Health Office to the Office of the Division of Professional Education, Burrill Academic Building.
 - 3) The applicant must show proficiency in written edited American English by submitting to the Office of the Division of Professional Education, Burrill Academic Building, a transcript of undergraduate work having a mark of B or better in English Composition I (EN 101) or passing marks for English Composition I and II (EN 101 and EN 102), or by obtaining and submitting an equivalent score on a "challenge" or CLEP examination.
 - 4) The applicant must be certified by the Speech Proficiency Committee as having taken a speech proficiency test for the purpose of early diagnosis and recommendation for any identified problem which pertains to having speech that:
 - is characterized by no apparent articulation disorders;
 - exhibits no phonotory, volume or rate patterns which would draw undue attention or interfere with intelligibility.

Speech proficiency screening is available to all incoming freshmen and transfer students at the beginning or prior to each academic year, usually at orientation sessions. A certificate of Speech Proficiency is sent by the Speech Proficiency Committee to the Office of the Division of Professional Education.

- 5) All students are required to complete approximately forty contact hours working with children or youth in schools or other agencies as part of an introduction to education course (ED 220, EE 220, or EE 230) or through some other means approved by the appropriate education department chairperson. Certification of the satisfactory completion of this experience requirement is provided by the appropriate education department to the Office of the Division of Professional Education.
 - 6) In addition, the following may be considered as constituting a basis for denial of admission or retention: evidence of specific behavior indicating that impairment of physical or mental health will be likely to interfere with satisfactory performance as a future teacher.
- b. Any additional criteria which may be required by a particular Teacher Education Program to which admission is sought. Any such criteria may be obtained from the appropriate department office.

Announcements of acceptance into a Teacher Education Program will be made upon satisfaction of all criteria. Students denied acceptance into a Teacher Education Program will be referred to the Office of the Vice President of Academic Affairs for replanning of their program of study.

ADMISSION TO STUDENT TEACHING PRACTICUM

Good standing in relation to the aforementioned admission criteria must be maintained.

A current tuberculin test and/or chest x-ray must be submitted to the College Health Service before placement in the Student Teaching Practicum.

The application form for the Student Teaching Practicum must be filed with the Office of the Division of Professional Education by February 1 for placement the following academic year. Students with unusual circumstances may file an application for a Spring placement by September 30 after consultation with the Director of Student Teaching and Certification.

Students may not carry other courses while student teaching.

Graduate students are reminded that a letter of eligibility must be requested from the Graduate School and forwarded to the Office of the Division of Professional Education.



Department of Educational Services

Associate Professor Marilyn Barry, Chairperson and
Graduate Program Coordinator
Professor Anthony DeLeo
Associate Professors: Tracy Baldrate, Paul Prescott
Assistant Professor William Murphy

The Department of Educational Services offers several programs designed to meet the needs of both undergraduate and graduate students who are interested in special education.

UNDERGRADUATE PROGRAMS

Bachelor of Science in Education

Students interested in certification as a Teacher of School Age Children with Moderate Special Needs (N-9) follow a program designed to meet Massachusetts certification standards. It should be noted that requirements for the certification of educational personnel in Massachusetts are being substantially modified. This in turn is necessitating corresponding changes in requirements for programs which include certification. Students graduating after August, 1981, should consult with the departmental chairperson concerning changes in program requirements.

All students planning to pursue a teacher education program must apply for admission and be accepted in the teacher education program. Information on the teacher education program may be found in the introductory section of the Division of Professional Education.

Three options are available through which undergraduates may pursue certification as a teacher of school age children with moderate special needs (N-9) while pursuing a baccalaureate degree in either Early Childhood or Elementary Education.

The first option provides for a dual major: Special Education/Early Childhood or Special Education/Elementary Education. Students choosing this option defer graduation at the completion of the four-year program for the baccalaureate degree and continue on to take four additional courses during the subsequent summer and complete a student teaching practicum during the first quarter of the next academic year. At the end of that time students will have completed a bachelor's degree in either Early Childhood Education or Elementary Education as well as a program designed to prepare teachers of school age children with moderate special needs (N-9). Students interested in this option should refer to Program A.

The second option provides for a bachelor's degree in either Elementary or Early Childhood Education at Bridgewater State College and a program designed to prepare teachers of school age children with moderate special needs (N-9) (but *not* a special education major). Students choosing this option graduate at the completion of their four-year program for the baccalaureate degree but continue on to take the four additional special education courses during the subsequent summer semester (for graduate or undergraduate credit) and complete the student teaching practicum (for graduate or undergraduate credit) during the first quarter of the next academic year. At the end of that time students will have completed a bachelor's degree in either Early Childhood or Elementary Education as well as a program designed to prepare teachers of school age children with moderate special needs (N-9). Students may apply graduate level credits toward a Master of Education in Special Education at a later time; however, they will only be allowed to transfer in 15 graduate credits (rather than 19½ credits earned). Students interested in this option should refer to Program B.

The third option provides for a bachelor's degree and a master's degree as well as a program designed to prepare teachers of school age children with moderate special needs (N-9). Students choosing this option graduate at the completion of their four-year program at Bridgewater State College with the baccalaureate degree in either Early Childhood or Elementary Education and continue to take four additional special education courses during the subsequent semester (for graduate credit) and complete a student teaching practicum (for graduate credit) during the first quarter of the next academic year. However, *students choosing this option must apply for acceptance into the Graduate School during their senior year*. After acceptance, they will be allowed to transfer all 19½ credits into the Master of Education in Special Education program. An additional 18 graduate credits must be completed. Students interested in this option should refer to Program C.

PROGRAM A

For students who are currently pursuing a bachelor's degree in either Elementary or Early Childhood Education at Bridgewater State College and who wish a dual major in Special Education in order to complete a program designed to prepare Teachers of School Age Children with Moderate Special Needs.

These courses must be completed during the Spring Semester of the senior (undergraduate) year:

	<i>Credits</i>
SE 400 (U) The Culturally Different Child with Special Needs	3
SE 414 (U) Teaching Strategies in Special Education	3
SE 426 (U) Reading Strategies in Special Education	3
SE 434 (U) Individual Educational Programming	3

These courses are required during the last semester of the senior year or earlier:

PY 251 (U) Human Learning and Memory	3
CD 292 (U) Language Acquisition and Development	3

* * * * *

SUMMER SESSION I:

SE 435 (U) Behavioral Interventions in Special Education	3
SE 436 (U) Consulting Skills for Special Education	3

SUMMER SESSION II:

SE 438 (U) Career Education for Special Needs Learners	3
SE 439 (U) Diagnostic Techniques for Special Educators	3

FALL SEMESTER:

SE 491 (U) Student Teaching Practicum	7½
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Total: 19½ credits

Students completing Program A will have earned a bachelor's degree with a major in Early Childhood or Elementary Education AND Special Education, which will be awarded at the next graduation date.

PROGRAM B

For students who are currently pursuing a bachelor's degree in either Elementary or Early Childhood Education at Bridgewater State College and who wish, without majoring in Special Education, to complete a program designed to prepare Teachers of School Age Children with Moderate Special Needs.

These courses must be completed during the Spring Semester of the senior (undergraduate) year:

	<i>Credits</i>
SE 400 (U) The Culturally Different Child with Special Needs	3
SE 414 (U) Teaching Strategies in Special Education	3
SE 426 (U) Reading Strategies in Special Education	3
SE 434 (U) Individual Educational Programming	3

These courses are required during the last semester of the senior year or earlier:

PY 251 (U) Human Learning and Memory	3
CD 292 (U) Language Acquisition and Development	3

* * * * *

SUMMER SESSION I (Following completion of bachelor's degree):

SE 435 (U/G) Behavioral Interventions in Special Education	3
SE 436 (U/G) Consulting Skills for Special Educators	3

SUMMER SESSION II (Following completion of bachelor's degree):

SE 438 (U/G) Career Education for Special Needs Learners	3
SE 439 (U/G) Diagnostic Techniques for Special Educators	3

FALL SEMESTER (Following completion of bachelor's degree):

SE 491 (U/G) Student Teaching Practicum	7½
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Total: 19½ credits

Students who opt for Program B graduate with a bachelor's degree in either Early Childhood or Elementary Education prior to the Summer Session courses. Students who decide to earn a master's degree in Special Education at a later day may transfer not more than fifteen appropriate graduate level credits into the master's program.

PROGRAM C

Students currently pursuing a bachelor's degree in either Elementary or Early Childhood Education at Bridgewater State College who wish to complete a program designed to prepare Teachers of School Age Children with Moderate Special Needs and earn a master's degree in Special Education.

These courses must be completed during the Spring Semester of the senior (undergraduate) year:

	<i>Credits</i>
SE 400 (U) The Culturally Different Child with Special Needs	3
SE 414 (U) Teaching Strategies in Special Education	3
SE 426 (U) Reading Strategies in Special Education	3
SE 434 (U) Individual Educational Programming	3

These courses are required during the last semester of the senior year or earlier:

PY 251 (U) Human Learning and Memory	3
CD 292 (U) Language Development and Acquisition	3

APPLICATION FOR AND ACCEPTANCE INTO GRADUATE PROGRAM (during the senior year)

SUMMER SESSION I (Following completion of bachelor's degree):

SE 435 (G) Behavioral Interventions in Special Education	3
SE 436 (G) Consulting Skills for Special Educators	3

SUMMER SESSION II (Following completion of bachelor's degree):

SE 438 (G) Career Education for Special Needs Learners	3
SE 439 (G) Diagnostic Techniques for Special Educators	3

FALL SEMESTER (Following completion of bachelor's degree):

SE 491 (G) Student Teaching Practicum	7½
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Sub-total: 19½ credits

- SE 513 (G) Research and Seminar in Special Education 3
- Humanistic and Behavioral Studies (G):
Consult *Graduate Program Requirements —
Master of Education* in the Graduate School
section of the Catalogue 6
- 3 ELECTIVES (500 level courses) (G) 9

Sub-total: 18 graduate credits

Total: 37½ graduate credits

GRADUATE PROGRAMS

The Department of Educational Services offers several programs designed to meet the needs of graduate students who are interested in special education. It should be noted that requirements for the certification of educational personnel in Massachusetts are being substantially modified. This in turn is necessitating corresponding changes in requirements for programs which include certification. Students graduating after August 1982 should consult with the departmental graduate program coordinator concerning changes in program requirements.

Master of Education in Special Education — Certification Track

Certified classroom teachers interested in certification as a Teacher of School Age Children with Moderate Special Needs (N-9) and a master's degree in Special Education follow a program designed to meet Massachusetts certification standards. Since this program is designed for students who already possess a Massachusetts classroom teaching certificate, applicants must file the Graduate School's form "Documentation of Certification Status." Students interested in this program should refer to Program D.

Master of Education in Special Education — Non-certification Track

Students interested in a Master of Education in Special Education program which does not lead to certification should refer to Program E.

Certificate of Advanced Graduate Study (CAGS) With an Emphasis on Special Education — Including a Certification Option

Students who have already earned a master's degree and who wish to study special education (with or without the certification option) as part of a Certificate of Advanced Graduate Study (CAGS) in Education program should refer to Program F.

PROGRAM D

For students certified as Massachusetts classroom teachers who wish to be certified as Teachers of School Age Children with Moderate Special Needs (N-9) and who wish to earn a Master's Degree in Special Education.

All accepted students must enroll under the direction of their advisor in *GS 501 Graduate Program Planning*, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of the Catalogue.

Required Courses in Special Education: *Credits*

- SE 510 (G) Exceptional Children in the Schools 3
- SE 400 (G) The Culturally Different Child with Special Needs
or
SE 540 (G) Contemporary Issues and Mandates in Bilingual
Special Education 3
- SE 414 (G) Teaching Strategies in Special Education
or
SE 546 (G) Strategies and Techniques for Adapting Bilingual
Resources and Materials for the Special Needs Learner 3
- SE 426 (G) Reading Strategies in Special Education 3
- SE 434 (G) Individual Educational Programming
or
SE 545 (G) Individual Educational Planning in Bilingual Program
Development and Instructional Alternatives 3
- SE 435 (G) Behavior Interventions in Special Education
or
SE 542 (G) Behavior Interventions in Bilingual
Special Education 3
- SE 436 (G) Consulting Skills for Special Educators
or
SE 547 (G) Multiple Roles for Bilingual Teachers of Moderate
Special Needs Children 3
- SE 438 (G) Career Education for Special Needs Learners 3
- SE 439 (G) Diagnostic Techniques for Special Educators
or
SE 541 (G) Non-Discriminatory Assessment I 3
- SE 517 (G) Development of Thought and Language in Young
Children
or
SE 544 (G) Language Development and Bilingualism 3
- SE 491 (G) Student Teaching Practicum 7½
or
SE 548 (G) Student Teaching Practicum or Internship
(Working with Bilingual Children) 6

Sub-total: 36 or
37½ graduate credits

Also required as part of the above sequence is a Psychology of Learning course. Students who have not had such a course as undergraduates should complete ED 520 Psychological Foundations of Education.

Upon successful completion of the above sequence, the student will be eligible to apply for certification as an N-9 Moderate Special Needs Teacher.

ADDITIONAL M.Ed. REQUIREMENTS:

- | | |
|---|---|
| • SE 513 (G) Research and Seminar in Special Education | 3 |
| • Humanistic and Behavioral Studies (G):
Consult <i>Graduate Program Requirements</i> —
<i>Master of Education</i> in the Graduate School section
of the Catalogue | 6 |

Sub-total: 9 graduate credits

Total: 45 or 46½ graduate credits

PROGRAM E

For graduate students interested in Special Education who wish to earn a master's degree (non-certification track) in Special Education. The program does not lead to certification as a Teacher of School Age Children with Moderate Special Needs.

All accepted students must enroll under the direction of their advisor in *GS 501 Graduate Program Planning*, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of the Catalogue.

<i>Required Courses in Special Education:</i>	<i>Credits</i>
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- | | |
|---|---|
| • SE 510 (G) Exceptional Children in the Schools | 3 |
| • SE 400 (G) The Culturally Different Child with Special Needs | 3 |
| • SE 414 (G) Teaching Strategies in Special Education | 3 |
| • SE 435 (G) Behavior Interventions in Special Education | 3 |
| • SE 436 (G) Consulting Skills for Special Educators | 3 |
| • SE 438 (G) Career Education for Special Needs Learners | 3 |
| • Students not holding or seeking certification in Special Education must also complete an appropriate experience through SE 503 (G) Directed Study | 3 |

Sub-total: 18-21 graduate credits

ADDITIONAL M.Ed. REQUIREMENTS

- SE 513 (G) Research and Seminar in Special Education 3
- Humanistic and Behavioral Studies (G):
Consult *Graduate Program Requirements —
Master of Education* in the Graduate School
section of the Catalogue 6
- Program Electives:
Courses (500 level) approved by the advisor
based upon the student's background and objectives 6-9

Total: minimum of 36 graduate credits

PROGRAM F

For students who have already earned a master's degree and who wish to study special education (with or without the certification option) as part of a Certificate of Advanced Graduate Study (CAGS) in Education program.

All accepted students must enroll under the direction of their advisor in *GS 501 Graduate Program Planning*, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of the Catalogue.

Students who wish to focus on special education within their CAGS program and who do *not* wish to be certified as a Teacher of School Age Children with Moderate Special Needs work closely with their special education advisor and pursue a course of study which meets their academic and professional objectives. For details, consult the "CAGS in Education" description in the Division of Professional Education section of the Catalogue.

CAGS students who wish to focus on special education and complete a program designed to prepare teachers of school age children with moderate special needs pursue the following course of study:

<i>Required Courses in Special Education</i>	<i>Credits</i>
• SE 510 (G) Exceptional Children in the Schools	3
• SE 400 (G) The Culturally Different Child with Special Needs	
or	
SE 540 (G) Contemporary Issues and Mandates in Bilingual Special Education	3
• SE 414 (G) Teaching Strategies in Special Education	
or	
SE 546 (G) Strategies and Techniques for Adapting Bilingual Resources and Materials for the Special Needs Learner	3
• SE 426 (G) Reading Strategies in Special Education	3
• SE 434 (G) Individual Educational Programming	
or	
SE 545 (G) Individual Educational Planning in Bilingual Program Development and Instructional Alternatives	3
• SE 435 (G) Behavior Interventions in Special Education	
or	
SE 542 (G) Behavior Interventions in Bilingual Special Education	3
• SE 436 (G) Consulting Skills for Special Educators	
or	
SE 547 (G) Multiple Roles for Bilingual Teachers of Moderate Special Needs Children	3
• SE 438 (G) Career Education for Special Needs Learners	3
• SE 439 (G) Diagnostic Techniques for Special Educators	
or	
SE 541 (G) Non-Discriminatory Assessment I	3
• SE 517 (G) Development of Thought and Language in Young Children	
or	
SE 544 (G) Language Development and Bilingualism	3
• SE 491 (G) Student Teaching Practicum	7½
or	
SE 548 (G) Student Teaching Practicum or Internship (Working with Bilingual Children)	6
	Sub-total: 36 or
	37½ graduate credits

ADDITIONAL CAGS REQUIREMENTS:

ED 570 (G) CAGS Seminar (taken prior to acceptance)	3
ED 581 (G) CAGS Extern Program	3

For details regarding general CAGS requirements, consult the “CAGS in Education” description in the Division of Professional Education section of the Catalogue.

COURSE OFFERINGS*

SE 211 The Special Needs Learner in the Pre-School 3 crs.

This survey course will enable students to gain knowledge of the special needs learner in different educational settings. Academic work will be reinforced through a minimum of 3 field-based experiences which will help the students develop an awareness of the special needs learner. Emphasis in this course will be on the special needs learner at the pre-school level.

SE 212 The Special Needs Learner in the Elementary School 3 crs.

This survey course will enable students to gain knowledge of the special needs learner in different educational settings. Academic work will be reinforced through a minimum of 3 field-based experiences which will help the students develop an awareness of the special needs learner. Emphasis in this course will be on the special needs learner at the elementary level.

SE 213 The Special Needs Learner in the Middle School 3 crs.

This survey course will enable students to gain knowledge of the special needs learner in different educational settings. Academic work will be reinforced through a minimum of 3 field-based experiences which will help the students develop an awareness of the special needs learner. Emphasis in this course will be on the special needs learner at the middle school level.

SE 214 The Special Needs Learner in the High School 3 crs.

This survey course will enable students to gain knowledge of the special needs learner in different educational settings. Academic work will be reinforced through a minimum of 3 field-based experiences which will help the students develop an awareness of the special needs learner. Emphasis in this course will be on the special needs learner at the high school level.

SE 317 Teaching Strategies in Mainstreamed Programs 3 crs.

Prq.: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510

This course will enable the student to identify appropriate strategies to effectively educate special needs learners in regular classroom settings. It will provide the bridge between the principles of mainstreaming and its educational implementation by highlighting instructional strategies and curriculum adaptations that are possible within the regular classroom. A field experience is involved.

SE 400 The Culturally Different Child with Special Needs 3 crs.

Prq.: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510

This course is designed to provide participants with a comprehensive study of how to evolve and implement appropriate individual educational programs (IEP's) consistent with special education laws, regulations, procedures, and assessment data. Major alternative instructional models with emphasis on the resource room will be addressed.

SE 414 Teaching Strategies in Special Education 3 crs.

Prq.: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510

This course will enable the student to develop the necessary competencies for teaching special needs children who are culturally and/or linguistically different. The course will combine psychological, linguistic, anthropological and educational findings with practical guidelines and strategies for instruction.

SE 415 Methods and Materials for the Academically Talented 3 crs.

Prq.: PY 100

Emphasis on the identification and placement of gifted pupils in our schools and the related program, enrichment activities, creative development, method and materials, modified curriculum, administration, motivation and treatment of underachievement.

*See page 83 for general information regarding course offerings.

SE 418 Etiology, Dynamics and Treatment of Children with Behavioral Needs **3 crs.**

Prq.: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510

The causes, characteristics, behavioral aspects and accepted syndromes for identification will be emphasized as well as the psychiatric procedures involved.

SE 422 Teaching Strategies for Severe Special Needs **3 crs.**

Prq.: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510

Residential schools, collaboratives, and other settings for severe special needs children and youth will be reviewed and teaching strategies for this population will be emphasized.

SE 426 Reading Strategies in Special Education **3 crs.**

Prq.: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510

The primary purpose of this course is to investigate and to adapt strategies for teaching reading to special needs children. Emphasis will be placed on the development of individualized reading assessments and educational plans.

SE 428 Rehabilitation and Special Education **3 crs.**

Prq.: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510

Review of all of the procedures and processes of helping the mentally retarded, the physically handicapped, the emotionally disturbed, and the multi-handicapped through the medium of rehabilitation services.

SE 429 Workshop in Special Education **3 crs.**

The practical aspects of special education techniques will be brought into focus through the use of off-campus facilities. In cooperation with area communities, activities will be carried out to find methods and techniques for utilization in both special needs and mainstream programs.

SE 434 Individual Educational Programming **3 crs.**

Prq.: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510

This course will enable the student to identify appropriate strategies to effectively educate learners in special education settings. Special emphasis will be placed on the planning, development and evaluation of the learner in the framework of the diagnostic-prescriptive concept.

SE 435 Behavior Interventions in Special Education **3 crs.**

Prq.: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510

This course will focus on the background, basic principles and techniques necessary for effective development of behavior with special needs students. Emphasis will be placed on behavioral procedures that have been found effective for individual and classroom use, including the ability to systematically observe and record student behavior. Other interventions and their applications to special education settings will also be considered.

SE 436 Consulting Skills for Special Educators **3 crs.**

Prq.: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510

This course emphasizes the development of consulting and training skills of the special educator. This will include a survey of the origins and dynamics of consulting techniques which will result in the student being able to work in a variety of settings.

SE 438 Career Education for Special Needs Learners **3 crs.**

Prq.: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510

This course will assist in preparing special educators to understand career educational needs of special needs learners. Students will develop skills in appropriate objective writing and curriculum design in the area of career education for special needs learners.

SE 439 Diagnostic Techniques for Special Educators 3 crs.

Prq.: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510

This course will prepare students to administer, analyze and interpret standardized tests which are applicable in special needs settings. Consideration will be given to assessing instructional needs appropriate to the age, sex, developmental stage, social, racial and linguistic background of special needs learners.

SE 491 Student Teaching Practicum 7½ crs.

Prq.: Unique program guidelines and prerequisites available from program coordinator and/or advisor

Practicum involves full-time teaching in the role for 1 quarter under qualified practitioner and college supervisor or a minimum of 150 clock hours in the role for 1 semester under qualified practitioner and college supervisor, or a minimum of 150 clock hours in the role for 2 consecutive semesters under qualified practitioner and college supervisor.

SE 498 Internship in Special Education 3-15 crs.

Prq.: Consent of the Department

Off-campus experiences in areas related to expanding the student's background in Special Education. In-depth exposure to such areas as rehabilitation programs, sheltered workshops, day care centers, hospital and institutional programs.

SE 499 Directed Study in Special Education 1-3 crs.

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

SE 502 Research credit to be arranged

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

SE 503 Directed Study credit to be arranged

Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

SE 510 Exceptional Children in the Schools 3 crs.

An orientation to all aspects of education pertaining to special needs children. Emphasis will be on educational characteristics of each area of exceptionality and the new role of special education in the schools. Chapter 766 and P.L. 94-142 will be included.

SE 512 Organization and Administration of Special Education 3 crs.

Prq.: SE 211 or SE 212 or SE 213 or SE 214 or SE 510

A comprehensive study of the psychological diagnosis, the personnel, the curriculum, the facilities, and the pupil services in an effective Special Education program.

SE 513 Research and Seminar in Special Education 3 crs.

Prq.: At least 30 credits toward the M.Ed. in Special Education

A careful research to help determine changes in this field so that improved services and techniques might be realized.

SE 514 New Education Policies for Children with Special Needs 3 crs.

Prq.: SE 211 or SE 212 or SE 213 or SE 214 or SE 510

The legal basis for the education of children with special needs to help them become accepted, productive and social members of our society. Integration, assessment, delabelization, and involvement declare the real responsibility of all parents/guardians, of all educators, and of all the American public.

SE 515 Teacher Orientation to Learning Disabilities 3 crs.

Prq.: PY 224 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510

Acquaint in-service teachers with current statistics concerning children with Moderate Special Needs and encourage appreciation of the wide spectrum of difficulties these children have. Diagnosis and evaluation will be studied in conjunction with the fields of perceptual handicaps, physiology, neurology, and psychology.

SE 517 Development of Thought and Language in Young Children 3 crs.

Prq.: PY 100, and SE 211 or SE 212 or SE 213 or SE 214 or SE 510

Basic principles of child growth and language. Language development in the whole child will be complemented and supplemented with a concentration on language disorders, testing and remediation. The influence of developmental (and other) deviations in growth and learning will be considered in understanding language problems.

SE 536 Development of Auditory and Visual Perceptual Skills in Young Children 3 crs.

Prq.: SE 515, PY 252, or permission of the Instructor

Development of vision and audition as part of a sensory-action system with stress on the interaction between the functional and clinical aspects. Considerable time will be devoted to the recognition of perceptual skills and classroom problems involved in learning and learning difficulties.

SE 540 Contemporary Issues and Mandates in Bilingual and Special Education 3 crs.

Prq.: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510

Skills will be developed for identifying "special needs" relative to educating children from minority groups using a case study approach. Emphasis will be on the laws (Chapter 766, P.L. 94-142) Lau Guidelines, Chapter 71A, Section 636, Section 504 of P.L. 93-112 and their implications for programming.

SE 541 Non-Discriminatory Assessment I 3 crs.

Prq.: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510

Skills will be developed for understanding the distinction between cultural differences and true disabilities. Emphasis will be on the linguistic and cultural biases of existing instruments and procedures and how to interpret test data, behavioral observations and informal techniques.

SE 542 Behavior Interventions in Bilingual Special Education 3 crs.

Prq.: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510

Skills will be developed for understanding how cultural differences affect behavior. The models of behavioral management will include positive peer culture, tribal orientation, cultural symbols, social relations in the classroom, and multicultural techniques in addition to the theories of Erikson, Maslow, and Skinner, and other psychological and cognitive models.

SE 543 Non-Discriminatory Assessment II

3 crs.

Prq.: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510; SE 541

Case studies will be utilized for sharing and interpreting test data to other teachers, administrators, parents and consultants as well as including the prescribing of instructional programs from the test data.

SE 544 Language Development and Bilingualism

3 crs.

Prq.: PY 100, and SE 211 or SE 212 or SE 213 or SE 214 or SE 510

Skills will be developed for identifying dominance and language proficiency, understanding theories of first and second language learning, relating methods and theories on reading to ESL materials and identifying biases and deficiencies in existing curriculum for linguistic and cultural minority students. Emphasis will be on the effect of culture and language differences on speech and language development.

SE 545 Individual Education Planning in Bilingual Program Development and Instructional Alternatives

3 crs.

Prq.: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510

Using a case study approach before writing an IEP, identifying child's strengths, weaknesses, learning style, general and specific behavioral goals, emotional, cultural constraints, and the criteria for moving to least restrictive environment, with an emphasis on preventing bilingual children from being referred to special education programs by identifying inadequate services for bilingual children and advocating for change under the mandates of Chapter 766 and Public Law 94-142.

SE 546 Strategies and Techniques for Adapting Bilingual Resources and Materials for the Special Needs Learner

3 crs.

Prq.: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510

Skills will be developed for organizing, planning, teaching and evaluating materials and programs for cultural/racial/linguistic biases and stereotyping, but with an additional focus on sensitivity to bilingualism and biculturalism. Emphasis will be on developing appropriate materials and strategies for meeting the needs of bilingual children in the classroom, the resource room, or least restrictive environment.

SE 547 Multiple Roles for Bilingual Teachers of Moderate Special Needs Children

3 crs.

Prq.: PY 100, and SE 211 or SE 212 or SE 213 or SE 214 or SE 510

Skills will be developed for the many roles a change-agent might function in, such as educators, consultants, advocates, liaisons, counselors, advisors and trainers. Emphasis will be on the major role of the Bilingual Special Educator as a change-agent in the school and community to reduce racial discrimination in regular and special education.

SE 548 Student Teaching Practicum or Internship (Working with Bilingual Children)

6 crs.

Prq.: Unique program guidelines and prerequisites available from program coordinator and/or advisor

Practicum involves full-time teaching in the role for 1 quarter under qualified practitioner and college supervisor or a minimum of 150 clock hours in the role for 1 semester under qualified practitioner and college supervisor, or a minimum of 150 clock hours in the role for 2 consecutive semesters under qualified practitioner and college supervisor.

Internship involves public school employment in the role for less than full-time for 2 consecutive semesters (minimum of 300 clock hours must be accumulated) under appropriate public school and college supervisor.



Department of Elementary and Early Childhood Education

Professor Wayne F. Dickinson, Chairperson
and Graduate Program Coordinator

Professors: Peter Bizinkauskas, Robert Daniel,
John Deasy, Ray Harper, Margery Kranyik
Robert MacCurdy, Wayne Phillips

Associate Professors: Diana Draheim, Vincent Worden

Assistant Professors: Burton Goldman, John Jones,
Gerald Thornell, Judith Deckers, Thomas Wolpert

UNDERGRADUATE PROGRAMS

Bachelor of Science in Education

ELEMENTARY EDUCATION

The Department of Elementary Education strives to provide the student with the professional competencies necessary to become an effective elementary education teacher, including an understanding of how students learn, and an ability to use appropriate and varied teaching procedures, materials, and evaluation techniques. A very important part of elementary teacher preparation is the provision for student teaching in actual school situations.

All students in a teacher education program must apply for admission, and be accepted in the teacher education program. Admission to a teacher education program is a prerequisite for enrollment in upper level professional courses and for all field experiences. Information on the teacher education program may be found in the introductory section of the Division of Professional Education.

Elementary Education Major

EE 220, EE 300, EE 330, EE 340, EE 350, EE 420, EE 460 and EE 470, CC 200, ED 480, EE 492, HI 221, ME 310, PE 320 or PE 223 or HE 482, MA 107, SE 212, SE 317, three credits in Geography as a Social Science, PY 224 or ED 230.

In addition to the above courses, each student, in consultation with a departmental advisor, is required to select 12 hours of course work in one of the following supplemental skill areas:

- reading
- mathematics
- the arts
- science
- health and physical education
- communication

EARLY CHILDHOOD EDUCATION

The Department of Elementary Education offers a major in early childhood education which enables the student to prepare for career opportunities with young children from infancy through age eight. Students are provided with professional preparation in understanding stages of child growth and development, curriculum planning, teaching procedures, and program evaluation.

The preschool concentration prepares students in the program for work in day care centers, nursery schools and other preschool child care service agencies.

The kindergarten-primary concentration is designed to meet the needs of students wishing to specialize in kindergarten-primary education, and provides practice teaching experiences in kindergarten and grades one through three.

Students completing the program will be eligible to meet Commonwealth of Massachusetts teacher certification requirements.

All students in a teacher education program must apply for admission, and be accepted in, the Teacher Education Program. Information on the Teacher Education Program may be found in the introductory section of the Division of Professional Education.

Early Childhood Major

EE 230, EE 372, SE 211, SE 317, EE 352, EE 420, EE 462, EE 474, ED 480, EE 492, CC 200, CD 292, CC 400, HI 221, HE 482, ML 310 or ML 453, MA 107, PE 320 or PE 223, PY 224 or 225, ME 310, SO 202, plus —
Preschool Concentration - EE 361, EE 497
Kindergarten-Primary Concentration - EE 370, EE 496

GRADUATE PROGRAMS

The Department of Elementary and Early Childhood Education offers the degree of Master of Education in several areas of study: Elementary Education, Early Childhood Education, Elementary School Mathematics, and Reading. In addition, students may focus on one or more of these areas of study as part a Certificate of Advanced Graduate Study (CAGS) in Education program; for details, consult the CAGS in Education description in this catalogue.

Master of Education in Elementary Education

This program is designed for teachers and future teachers of grades kindergarten through six. It is flexible enough to meet the needs of those with a background in liberal arts as well as those who have an undergraduate major in elementary education.

It should be noted that the regulations governing certification of educational personnel in Massachusetts have been substantially modified. Those people seeking State certification in Elementary Education should consult with the department's graduate program coordinator concerning the new state requirements.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. As part of their program, students must satisfactorily complete the following curriculum:

1. Research Methods and Findings: GC 500 Research and Evaluation — 3 graduate credits.
2. Humanistic and Behavioral Studies: Consult *Graduate Program Requirements — Master of Education* in the Graduate School section of this catalogue — 6 graduate credits.
3. Departmental Requirements: EE 450 Elementary School Curriculum and EE 554 Graduate Seminar in Elementary Education — 6 graduate credits.
4. Program Electives: Courses approved by the advisor which meet the academic and professional objectives of the student — 15 or more graduate credits.

For additional information relative to this program, students not yet accepted should consult with the program's coordinator.

Graduate students planning to student teach at the elementary level must first complete 21 graduate credits of approved degree work or obtain permission from the Head of the Division of Professional Education.

The departmental offerings listed below include the following courses which may not be taken for graduate credit: EE 220, EE 230, EE 390, EE 420, EE 454, and EE 499.

Master of Education in Early Childhood Education

This program is designed for persons who wish to pursue an advanced degree in early childhood education in association with careers in public schools, non-public preschools, Head Start Centers, day care centers, and other human service agencies. It is flexible enough to meet the needs of those who have a background in the liberal arts as well as those who have already specialized in early childhood education.

It should be noted that the regulations governing certification of educational personnel in Massachusetts have been substantially modified. Those people seeking State certification in Early Childhood Education should consult with the department's graduate program coordinator concerning the new state requirements.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. As part of their program, students must satisfactorily complete the following curriculum:

1. Research Methods and Findings: GC 500 Research and Evaluation — 3 graduate credits.
2. Humanistic and Behavioral Studies: Consult *Graduate Program Requirements — Master of Education* in the Graduate School section of this catalogue — 6 graduate credits.
3. Departmental Requirements: EE 450 Elementary School Curriculum and EE 575 Graduate Seminar in Early Childhood Education — 6 graduate credits.
4. Program Electives: Courses approved by the advisor which meet the academic and professional objectives of the student — 15 or more graduate credits.

For additional information relative to this program, students not yet accepted should consult with the program coordinator.

Graduate students planning to student teach must first complete 21 graduate credits of approved degree work or obtain permission from the Head of the Division of Professional Education.

The departmental offerings listed below include the following courses which may not be taken for graduate credit: EE 220, EE 230, EE 390, EE 420, EE 454, and EE 499.

Master of Education in Elementary School Mathematics

The Department, in conjunction with the Department of Mathematics, offers a program leading to the degree of Master of Education in Elementary School Mathematics. This program is designed for teachers certified in Elementary Education. All candidates for the degree are required to take a minimum of 21 credits of content courses in mathematics as a *combined* total of undergraduate and graduate work. At least nine of these credits must be taken at the graduate level. A designated member of the Mathematics Department will advise each degree applicant upon entry into the program with regard to the mathematics courses which he or she should take. A permanent advisor to the candidate shall be assigned from the Department of Elementary Education. Degree candidates who have not had at least 6 semester hours of introductory modern mathematics must take MA 107 and/or MA 108 (College Mathematics for Elementary Majors I-II). Candidates must also have taken EE 350 (Methods and Materials in Elementary School Mathematics). It should be noted that these three courses may not be offered as credit toward the minimum 30 credits required for the degree.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. As part of their program, students must satisfactorily complete the following curriculum:

1. Research Methods and Findings: GC 500 Research and Evaluation — 3 graduate credits.
2. Humanistic and Behavioral Studies: Consult *Graduate Program Requirements — Master of Education* in the Graduate School section of this catalogue — 6 graduate credits.
3. Departmental Requirements: EE 351, EE 550, 9 graduate credits in mathematics — 15 graduate credits.
4. Program Electives: Education and/or mathematics courses appropriate to the degree program and approved by the advisor — 6 or more graduate credits.

For additional information relative to this program, students not yet accepted should consult the departmental chairperson.

The departmental offerings listed below include the following courses which may not be taken for degree credit: EE 220, EE 230, EE 350, EE 420, EE 454, or any student teaching credit.

Reading Services Committee

Professors: Deasy, Dickinson (Committee Coordinator)

Associate Professor: Bizinkauskas

Assistant Professors: Deckers, Wolpert

Master of Education in Reading

The program is designed to prepare experienced teachers for positions as consulting teachers of reading (kindergarten through grade twelve). Only those who have completed one year of successful full-time classroom teaching in an accredited school will be considered for admission to the program. Applicants must file the Graduate School form *Certificate of Teaching*. A minimum of thirty-six approved degree credits is required in this degree program.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. As part of their program, students must satisfactorily complete the following curriculum:

1. Humanistic and Behavioral Studies: Consult *Graduate Program Requirements — Master of Education* in the Graduate School section of this catalogue — 6 graduate credits.
2. Departmental Requirements (which provide the theory, content, and professional practice of the specialty): EE 530, EE 540, EE 541, EE 542, EE 544, and EE 555 — 18 graduate credits.
3. Research Methods and Findings: This program requirement will be met through research components in four of the professional courses listed above (EE 540, EE 541, EE 542, EE 555).
4. Program Electives: Courses in reading and/or related fields, approved by the advisor, which meet the academic and professional objectives of the student — 6 or more graduate credits.
5. Practica in Reading: the equivalent of a half-semester practicum is required for certification as a consulting teacher of reading. Students in this graduate program seeking certification as consulting teachers of reading must fulfill the requirements for clinical and supervisory components of the practicum. The program has several options which have been developed to meet the requirements of state certification while providing for the different professional circumstances of the student. These options should be discussed with the student's advisor — 6 graduate credits.

Students not seeking certification may substitute appropriate electives for these practica.

For additional information relative to this program, students not yet accepted should consult with the Committee Coordinator of the program.

The departmental offerings listed below include the following courses which may not be taken for graduate degree credit: EE 220, EE 230, EE 330, EE 390, EE 420, EE 436, and EE 499.

COURSE OFFERINGS*

EE 100 Effective Reading

2 crs.

A developmental course dealing with efficient and effective approaches to reading and studying skills at the college level. Emphasis is placed on reading rate comprehension, skimming, study habits, memory training, testing techniques and vocabulary development. Reading effectiveness is built up through the teaching of thorough previewing, rapid reading, and concise note taking. A semester course meeting weekly for 75 minutes; one hour weekly lab also.

EE 101 Speed Reading

1 cr.

A developmental course designed to increase both speed and comprehension in a wide variety of materials. Emphasis is placed on developing a range of reading rates for different purposes. Techniques introduced cover study reading, skimming, article reading, and pleasure reading. An eight week course meeting weekly for two-hour sessions. An additional hour of guided independent study in the College Reading Laboratory is required.

EE 220 Introduction to Strategies of Teaching

3 crs.

Taken by sophomore elementary majors as their first course in professional education. Observation of elementary age children in a classroom setting, opportunity for working with such children, confirmation of the choice of teaching as a career and the beginning of the development of skills needed to be a successful teacher. Students will be apprised of both current issues and problems faced by teachers in the public schools. All types of possible classroom teaching strategies will be presented and discussed fully. In addition to 3 class hours there is a 3 hour block of time per week set aside for field work as well as a 1 hour per week departmental seminar.

EE 230 Introduction to Early Childhood Education

3 crs.

Survey of Early Childhood Education programs in relation to historical perspectives, philosophical foundations and sociological factors. Students will investigate and evaluate Head Start, Day Care Services, Montessori, Nursery School, Kindergarten and Primary Grades. Opportunities will be provided for field experiences.

EE 300 Elementary Art Methods

.5 crs.

An introduction to methods and materials in art for the elementary teacher. Art projects typical of those done by children in grades K-6 are produced. Classroom management, bulletin board design, and lesson introduction techniques are explored.

EE 330 Teaching Reading in the Elementary School

3 crs.

Prq.: PY 100

A consideration of the teaching/learning process involved in effecting mastery of skills; guiding the transfer of these skills as children read; promoting voluntary, independent reading; and assessing needs and monitoring progress.

EE 331 Developmental Reading in the Secondary School

3 crs.

Prq.: PY 100

The techniques used to develop reading skills in the secondary school, evaluation of the modern reading materials available, a study of techniques used to analyze students' reading needs and a survey of administration of reading programs in the secondary school with implications for teachers as well as administrators.

*See page 83 for general information regarding course offerings.

EE 340 Methods and Materials in Elementary Language Arts 3 crs.

Prq.: PY 100

Strategies in the elementary school to enhance the communication skills of reading, writing, listening, and speaking through pupil involvement in purposeful communication will be stressed. Special emphasis will be given to the teaching of writing and to the development of thinking skills through questioning.

EE 350 Methods and Materials in Elementary School Mathematics 3 crs.

Prq.: PY 100 and MA 107

Examining the purpose and content of the contemporary elementary school mathematics curriculum, this course emphasizes how children learn mathematics, a wide variety of teaching procedures and instructional materials, evaluation techniques for use in the classroom, and pedagogical methodology for individualization. Designed also to create awareness of affective experiences in the teaching/learning process of elementary school mathematics.

EE 351 Improving Mathematical Instruction in the Elementary School 3 crs.

Prq.: EE 350

Appraisal of current mathematics programs, evaluation of individual pupils with a class, consideration of current instructional procedures and materials designed to provide for individual differences.

EE 352 Methods in Early Childhood Mathematics 3 crs.

Prq.: EE 230

A methods course in the teaching of mathematics to the 3-8 year old child. Basic psychological structures relating to mathematics and current research on mathematics learning will set the background for investigation and rationalization for what should be taught at this level. Skills in student assessment and teaching strategies will be developed.

EE 353 Strategies of Teaching Mathematics in the Middle School 3 crs.

Designed to present to the participant a view of the current middle school mathematics curriculum, this course shall emphasize how students learn mathematics, appropriate pedagogical and methodological techniques, evaluation procedures for use in the classroom, and techniques for individualization to allow for meaningful learning of mathematical skills and concepts. Emphasis is also placed upon participant awareness of affective as well as cognitive experiences in the middle school mathematics process.

EE 361 Planning and Programming for Preschool 3 crs.

Presentation of a comprehensive view of preschool today including developmental characteristics of young children, planning the environment, programming, licensing, staffing, community involvement, and parent relationships. Opportunities for field observations will be provided. Required for those students wishing to student teach in a preschool setting.

EE 362 Methods and Materials in Elementary Art 3 crs.

The objective of art education, role of the classroom teacher, developmental stages in the creative growth of children; materials, processes, tools and teaching procedures which will foster this growth at the various grade levels; correlation of art with other subject fields and evaluation of student progress.

EE 370 Kindergarten Theory and Methods 3 crs.

Prq.: PY 100

The philosophy of modern kindergarten education including exploration of contemporary theories and strategies. Developmental characteristics and learning styles of the young child are studied and related to initial school experiences. Curriculum strategies and materials are examined and evaluated. Opportunities to observe the kindergarten child will be provided.

EE 371 The Preschool 3 crs.

Prq.: PY 100

Current emphasis on the schooling of young children in a preschool setting is the direction of this course. The psychological, physical, and emotional norms of this age group are explored. Current materials available to the teacher are examined. Recommended for those interested in the very young preschool and kindergarten teaching.

EE 372 Success in Beginning Reading 3 crs.

A thorough examination of the language and perceptual background that children bring to the learning tasks of kindergarten and grade one; the initial steps in developing reading and writing skills; and the possibilities for the creative uses of these skills in the primary grades.

EE 373 Helping Children to Write Creatively 3 crs.

Prq.: A Reading or Language Arts course

Using a variety of inspirational vehicles, the student is guided to develop and test and demonstrate a number of ideas for helping elementary children to write creatively. Attention is given to valuing fluency over subject matter, to developing positive attitudes toward self as a teacher of young writers and toward students as writers, to relevant research findings, to goals and curriculum, and to evaluation. Offered only through the Program of Continuing Education.

EE 390 Field Based Practicum 6 crs.

Prq.: PY 100, EE 220, and acceptance and good standing in Teacher Preparation Program
Community Public Schools serve as laboratories in which students engage in observation and participation in the teaching/learning process. Through active participation with the cooperating teacher the student will demonstrate an ability to sequence meaningful learning activities for individuals, small groups and total class instruction. The student teacher becomes an integral participant in the school community by gradually assuming the obligations of the classroom teacher. Throughout this experience the cooperating teacher and student teacher engage in a continuous evaluative dialogue which is designed to identify areas of strength and weakness so that alternative strategies might be employed to enhance the student's professional growth.

EE 420 Educational Measurement 3 crs.

Procedures for developing and evaluating classroom teacher-made tests and a survey of standardized testing practices used in the K-12 program. Emphasis will be placed on the student's intended area and/or level of concentration.

EE 435 Teaching Study Skills and the Uses of Reading 3 crs.

Opportunities open to classroom teachers for promoting voluntary reading through individualized reading, classroom specialties and curricular related research projects. Consideration of the ways in which teachers can guide pupils to apply their basic readings skills as they study content subjects, locating, selecting, organizing information, preparing reports, setting their own purposes for reading.

EE 436 Remedial Reading Techniques for Classroom Teachers 3 crs.

Prq.: EE 330 or SE 336 or permission of the Instructor

Experience in analyzing learning needs, preparing remedial plans, and providing highly motivated, intensive instruction to overcome specific weaknesses. Testing and tutoring experiences with elementary children. Two lecture and two laboratory periods weekly.

EE 441 Methods & Materials in Outdoor Education 3 crs.
for the Elementary Teacher

New trends and practices in Elementary Curriculum and methods in outdoor education will be explored in a natural setting. Analysis of different approaches to curriculum construction, teaching procedures, integration of material to classroom and school setting will be implemented. Offered only through the Program of Continuing Education.

EE 442 Methods and Materials in Outdoor Education II 3 crs.

A two phase program including two in-house weekend workshops. The course will deal with the process of individually researching, designing, and developing outdoor education projects for elementary and high school children. An emphasis will be on Ocean Studies and Wilderness Experiences.

EE 450 Elementary School Curriculum 3 crs.

Prq.: PY 100

Roles of the administrator, the teacher, the parent and the child in the development of the changing curriculum in the elementary school. Use of action research, in-service training, innovations for curriculum improvement, school organizations, team teaching, the non-graded school, individualized instruction, the revaluation of objectives and democratic values.

EE 452 Methods and Materials in Elementary Education 3 crs.

Prq.: PY 100

Effective ways of vitalizing the teaching/learning process through teacher-pupil planning, participation and evaluation. Emphasis on creative teaching and the individualized approach. Materials and strategies are examined in the light of correct issues.

EE 454 Seminar in Elementary Education 3 crs.

A culmination of all professional experiences in preparation for teaching. Included are review and evaluation of current elementary school practices, discussion of professional ethics and school law, professional growth opportunities, procedures for securing a teaching position, and preparation for and the responsibilities of the first teaching position. Open to all senior elementary majors or by permission of the Chairperson.

EE 455 Drug Education for the Elementary School Teacher 3 crs.

Prevention of drug abuse is the chief purpose of the course. How to acquaint elementary teachers with the causes and cure of the problem. A review of current methods and materials in drug education will be featured. Offered only through the Program of Continuing Education.

EE 456 Current Issues in Elementary Education 3 crs.

Prq.: PY 100, 9 hours in Education

This course focuses on influential issues in contemporary education. Specific emphasis is placed on the following topics: financial problems; moral and ethical considerations; interplay of educational techniques; the teacher as a person and a professional; the role of the school as a change-agent in society.

EE 460 Methods and Materials in Elementary Science 3 crs.

Prq.: PY 100

Goals of elementary school science instruction and the methods of attaining them through "newer" science programs, problem-solving, experimentation, and varied instructional media are examined.

EE 462 Science and Social Studies Methods and Materials in Elementary Science 3 crs.

Prq.: PY 100

The goals of scientific inquiry and responsible citizenship. The establishment of objectives and the selection of appropriate methods, materials, and techniques of planning to meet these objectives. Current trends in the teaching of both science and social studies. Innovative ideas found in the newer programs.

EE 470 Methods and Materials in Elementary Social Studies 3 crs.

Prq.: PY 100

Emphasis is placed on current trends including objectives, curriculum, creative pupil-teacher planning, teaching techniques involving extensive use of instructional media and study tours of New England.

EE 473 Improving Elementary School Social Studies 3-6 crs.

The intent of this course is to develop with the student a series of strategies, affective as well as cognitive, that combines the best elements of the teaching-learning experience in elementary school social studies. The newest trends and practices in social studies curriculum and methodology are explored in a laboratory context.

EE 474 Methods and Materials in Early Childhood Language Arts 3 crs.

Prq.: PY 100

Ways of teaching young children with a focus on Language Arts strategies and materials. Learning theories and methods of individualization stressing the child as a unique individual. Emphasis on classroom organization and the use of innovative teaching techniques.

EE 475 Seminar in Early Childhood Education 3 crs.

Study of problems and issues related to the education of young children. Emphasis will be placed on current research, learning theories, curricular and methodological concerns. Each student will make an extensive study of a significant issue related to Early Childhood Education.

EE 490 Supervised Teaching in the Elementary Schools — Art 7½ crs.

Prq.: Acceptance and good standing in Teacher Preparation Program

Supervised experiences in classroom art activities. Experiences gained in teaching techniques, materials, individual differences, and classroom management. Supervision by the cooperating teacher and college supervisor. Full time for one quarter.

***EE 492 Supervised Teaching in Public Schools — Elementary 7½ or 15 crs.**

Prq.: Acceptance and good standing in Teacher Preparation Program

Supervised experiences in classroom activities. Experiences gained in teaching techniques, individual differences and classroom management. Opportunities available in a variety of instructional environments. Supervision by the cooperating teaching and college supervisor. Full time for either one quarter or a full semester.

EE 496 Student Teaching in the Kindergarten 7½ crs.

An eight week field experience at the kindergarten level under the guidance of a cooperating teacher and a college supervisor. Opportunities for participation in pupil observation, program planning and utilization of contemporary teaching strategies.

EE 497 Student Teaching in the Preschool 7½ crs.

Supervised student teaching experience in a preschool setting with children infancy through age five. Emphasis on development, implementation and evaluation of innovative preschool programs. The student participates in a total program, five days a week for eight weeks in either Day Care Center, Nursery School or Head Start Program.

*For elementary majors a semester of student teaching will be required beginning the academic year 1981-82 and thereafter.

EE 499 Directed Study in Elementary Education

1-3 crs.

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

EE 502 Research

credit to be arranged

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

EE 503 Directed Study

credit to be arranged

Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

EE 530 Enhancing Language Skills in the Classroom

3 crs.

The intent of the course will be to: 1. heighten teacher perception of communication potential in the classroom, 2. suggest techniques for the use of language skills as the vehicle in all content areas, 3. assist the teacher in the design of materials to fit special needs of the classroom, 4. aid the teacher in the classroom implementation of the designed materials.

EE 540 Improving Reading Instruction

3 crs.

Prq.: EE 330, EE 331, or equivalent basic course in the teaching of reading

Classroom practitioners identify behaviors that are demonstrated by good readers, analyze the factors in teaching that effect these behaviors and develop plans for modifying instruction.

EE 541 Diagnosis and Correction of Reading Disabilities I

3 crs.

Prq.: EE 540 or permission of the Instructor

Designed to prepare both elementary and secondary remedial reading teachers. Part I of this course will emphasize the identification of specific instructional needs, development of remedial plans, and provision of highly motivated instruction to overcome indicated weaknesses.

EE 542 Diagnosis and Correction of Reading Disabilities II

3 crs.

Prq.: EE 541 or permission of the Instructor

In Part II, attention will be focused on formal diagnostic procedures, theories of causation, and problems encountered in organizing and administering remedial programs.

EE 543 Effective Reading Programs

3 crs.

Prq.: 9 graduate credits in reading or permission of the Instructor

Current and evolving practices and programs in the teaching of reading. Teachers, reading specialists and administrators will be helped to develop practical plans for insuring that their own reading programs successfully meet the needs of all their students.

EE 544 Seminar in Reading

3 crs.

Prq.: 18 credits toward the M.Ed. in Reading with a minimum of 9 credits in reading, or permission of the Instructor

Students are guided to examine, review, and analyze their graduate sequence of courses and develop a new synthesis of their course work, research, and professional experience.

EE 545 Clinical Practicum in Remedial Reading

3 crs.

Prq.: Permission of Advisor

Qualified graduate students work with school pupils assessing instructional needs, diagnosing learning difficulties, and providing high intensity, well-motivated instruction.

EE 546 Supervisory Practicum in Reading Services

3 crs.

Prq.: Permission of Advisor

Candidates assume a leadership role in a school setting as they assist teachers to plan improvements in reading programs to meet teachers' assessed needs.

EE 547 Internship in Reading **3 or 6 crs.**

Prq.: Permission of Advisor

Offers qualified graduate students in reading an alternative means of satisfying the practicum requirements for State certification for Consulting Teacher of Reading.

EE 549 Reading in the Content Areas **3 crs.**

Designed in a workshop format to have students use their own textbooks to develop exercises which aid children in processing content print. Vocabulary strategies, directed reading processes, skill acquisition lessons, study guides, and levels of questioning are analyzed and utilized as they apply to the different content material.

EE 550 Advanced Research Topics in Elementary School Mathematics **3 crs.**

Prq.: Completion of, or enrollment in, all other required courses in the degree program

Students accepted will pursue an individualized program of advanced study and research, focused on a substantive topic pertaining to the elementary school mathematics program, and eventuating in an acceptable documented report. Periodic meetings will be scheduled by the instructor. Each student's program must be approved by the instructor and the department chairperson.

EE 551 Discovering Science — Current Elementary School Science Programs **3 crs.**

Prq.: EE 460, EE 462 or permission of the Instructor

Provides students with opportunities to explore the philosophy, psychology, materials, and methods of implementation of the inductive programs for elementary science and to participate in a curriculum development process. Most resource materials used originate in current elementary science programs — Elementary Science Study, Science--A Process Approach, and the Science Curriculum Improvement Study.

EE 552 Methods and Materials for the Open Concept in Elementary Schools **3 crs.**

An introduction to an accountable form of open education in which practical units, providing multiple learning experiences for children and applicable in the classroom, are designed. Learning experiences, learning activities, student contracts, independent study units, grouping, and classroom management are discussed and incorporated into the unit design.

EE 553 Community Resources for the Elementary School Teacher **3 crs.**

Prq.: PY 100, Teaching Certificate, or Permission of the Instructor

Designed to acquaint elementary school teachers with community resources in the area that may help them to meet their goals. A theme will be selected and representatives of agencies that illuminate the theme will contribute.

EE 554 Graduate Seminar in Elementary Education **3 crs.**

Prq.: 21 approved graduate credits with a minimum of 12 credits in elementary education

An integration of formal study, current research and personal experience. Each student will make an extensive study of a significant problem in elementary teaching.

EE 555 Supervision and Administration of Reading Programs **3 crs.**

Prq.: 9 graduate credits in reading

A graduate course designed to provide experiences that will provide for appraisal of the components of a reading program and examine research that suggests strategies in change behavior of teachers.

EE 556 Curriculum for the Gifted Child in Elementary Schools **3 crs.**

New trends and practices in curriculum development to encourage the full development of the gifted are studied. Local, regional, state and national movements are examined. Students study curriculum problems and build a curriculum.

EE 561 Current Issues in Early Childhood Education 3 crs.

Exploration of issues confronting the early childhood educator today. Examination of public policy issues, sex stereotyping, mainstreaming, back-to-basics, parent education, bilingual and multi-ethnic education and family structure.

EE 562 Early Childhood Curriculum - Ages 2-5 3 crs.

Provides students with opportunities to explore all aspects of preschool and kindergarten program curricula. Course focuses on planning and implementing curriculum in readiness skills, language development and communication arts. Observation and participation field component included.

EE 563 Early Childhood Curriculum - Ages 5-7 3 crs.

For students interested in planning teaching strategies for primary grades. Course explores language arts, math, science, social sciences and classroom management. Observation and participation field component included.

EE 564 Administration of Early Childhood Programs 3 crs.

Attention is given to administration of various early childhood settings with emphasis on state licensing regulations, staff development, physical planning, budget matters, program evaluation and home-school relationships. Discussions, reading and role playing are used.

EE 565 Math Anxiety: Theories and Principles for Elementary School Personnel 3 crs.

A comprehensive study of mathophobia. The course content, ideas, and materials promote awareness of math anxiety and of those obstacles that math avoidance creates. Emphasis on techniques and strategies in reducing math anxiety for children. For elementary school teachers, administrators, and other interested personnel.

EE 575 Graduate Seminar in Early Childhood Education 3 crs.

A study of problems and issues related to the education of young children. Emphasis will be placed on current research, learning theories, curricular and methodological concerns. Each student will make an extensive study of a significant issue related to Early Childhood Education.



Department of Health, Physical Education, and Recreation

Professor Catherine Comeau, Chairperson
and Graduate Program Coordinator

Professors: Joseph Huber,

Patricia Phillips, Mary Lou Thornburg

Associate Professors: Regina Gross, Virginia Hogg,

Thomas Knudson, Harry Lehmann,

Hazel Schopp, Eric Sills, Douglas Winnail

Assistant Professors: Edward Braun, Ann Coakley,
Carolyn Cramer, Paul Dubois, Genevieve Fitzpatrick,

Robert Frederick, Janice Harris, Shirley Krasinski,
Peter Mazzaferro, Johanne Smith, Joseph Yeskewicz

Instructors: Marcia Anderson,

Marjorie Rugen, Mary Lou Thimas

The Department of Health, Physical Education and Recreation offers both undergraduate and graduate programs in the areas of Health and Physical Education.

At the undergraduate level the department offers a major in Physical Education which leads to a Bachelor of Science or Bachelor of Arts degree, and a Health Minor.

Graduate study offered by the department includes: a program in the area of Health which leads to a Master of Education in Health Science; a program in the area of Physical Education which leads to a Master of Science in Physical Education; and study in the areas of Health and/or Physical Education as part of the CAGS (Certificate of Advanced Graduate Study) in Education program offered by the Division of Professional Education.

The department also offers undergraduate and graduate courses in Health, Physical Education and Recreation available to all students.

UNDERGRADUATE PROGRAMS

Bachelor of Arts/Bachelor of Science

The Health, Physical Education and Recreation Department offers the Physical Education major an opportunity to elect their area of study from among eight concentrations (areas of specialization) and two Teacher Certification programs in Physical Education and two Teacher Certification programs in Health.

The concentrations which are available have been developed so as to prepare graduates to pursue career opportunities in community based organizations such as business, industry, agencies and hospitals. These concentrations, which include internships in various settings in the community, have expanded the role of the physical educator and health educator beyond the teaching environment in schools thus preparing the graduate for new career opportunities.

Teacher Certification programs in both Health and Physical Education are also available for those students who wish to teach in the public schools. These students may elect one of the four Teacher Certification programs which are available:

Teacher Certification in Physical Education	K-9 level
Teacher Certification in Physical Education	5-12 level
Teacher Certification in Health	K-9 level
Teacher Certification in Health	5-12 level

Physical Education Major

Students majoring in Physical Education must complete a minimum of 121 credits for graduation. This requirement includes the following 24 credit major and cognates:

PE 100, PE 101, PE 117, PE 217, PE 401, 9 physical education activity courses, HE 102, BI 102, BI 280, PY 100.

The remaining credits necessary for completion of the degree include the General Education Requirements and one or more of the following selections:

1. elect from the eight concentrations listed below available to the Physical Education major;
2. elect a Teacher Certification option in Physical Education or Health;
3. develop own individualized program of study (with assistance of advisor);
4. combine the Physical Education major with a major or minor in another discipline;
5. combine several of the above.

Concentrations available to the Physical Education major:

Athletic Training Concentration

This concentration, which is an approved National Athletic Trainers Association program, prepares the Physical Education major for careers related to the care and prevention of athletic injuries. The program includes conditioning, preparation for sports participation, rehabilitation programs, and administration of an Athletic Training facility. Practical experience through internship is an important aspect of the program. Since there is limited enrollment based on selection-retention procedure, interested students should consult the department relative to this procedure.

PE 240, PE 324, PE 340, PE 450, PE 498, HE 302, HE 471, SO 202 and a chemistry or physics course.

Coaching Concentration

This concentration prepares the Physical Education major to apply concepts and principles related to all aspects of coaching including: the player, team, coach, and administration of athletic programs for youth and adults. Internships are an important aspect of this concentration.

PE 240, PE 414, PE 481, PE 498, two techniques of coaching and two officiating courses, HE 302, CC 200, SO 202.

Exercise Science/Health Fitness Concentration

This concentration prepares students for career opportunities in the area of health and fitness in such settings as industry, hospitals, agencies, education, and human service organizations. Emphasis is on cardiovascular health which includes: physical health evaluation, graded

exercise tests, exercise prescription and physical activity program development. Internships off campus in the settings identified above are an important aspect of this concentration.

PE 201, PE 240, PE 402, PE 403, PE 404, PE 498, CH 125 or CH 131, PY 355, SO 202, HE 471.

Health Concentration

This program provides the Physical Education major with Health knowledge that, in combination with their Physical Education background, prepares the student for career opportunities that involve both areas as a foundation for health promotion. A Health minor is also available (see information under Health minor).

HE 102, plus four of the following courses: HE 300, HE 301, HE 305, HE 471, HE 474, HE 477, HE 478, HE 480, HE 481

Motor Development Therapy/Adapted Physical Education Concentration

This concentration prepares the Physical Education major to work with special needs children, youth and adults. The program focuses on the role of Physical Education (physical activity and psycho-motor development) to meet the developmental and leisure time needs of this population so as to prepare graduates for career opportunities related to physical education and special needs children, youth and adults. An opportunity for practical experience working with special needs populations is provided through off campus internships as well as the department sponsored Children's Physical Developmental Clinic.

PE 324, PE 328, PE 498, PY 224, PY 328, PY 355, PY 370, SE 212 or SE 214

Physical Education for Adults Concentration

This concentration prepares the Physical Education major for career opportunities related to physical activity programs for the adult population including senior citizens. It focuses on the needs of this population and the unique contributions that physical education can make to these individuals in a variety of settings. Internships where students work with this age group are an important aspect of this program.

PE 310, PE 324, PE 332, PE 403, PE 498, 3 physical education activity courses (in addition to the major requirement) SO 202, SO 326, PY 310

Physical Education for the Preadolescent Child Concentration

Through this concentration the Physical Education major learns about the preadolescent child and the important role of physical education and physical activities in the preadolescent's growth and development. Internships where students work with this age group are an important aspect of this program.

PE 225, PE 324, PE 326, PE 465, PE 485, PE 498, HE 302, PY 225, SO 202, an art and a music course

Recreation Concentration

This concentration provides the Physical Education major with the knowledge and skills to pursue career opportunities that utilize physical education and professional recreation expertise in business, industry, agency or recreational settings. Elective opportunities in challenge and Outward Bound type activities are also available. Internships are an important aspect of this program.

PE 230, PE 332, PE 461, PE 462, PE 498, 2 additional recreational courses approved by the department

Teacher Certification Programs

Teacher Certification options available through the department are as follows:

Teacher Certification in Health - grades K-9

Prerequisites:

1. Major in any discipline
2. Acceptance in college and department Teacher Preparation Programs
3. Health Concentration or Health Minor for Physical Education majors, or Health Minor for other majors

Required Courses:

HE 102, HE 300, HE 302, HE 305, HE 471, HE 480, HE 482, HE 492, PE 100, BI 102, BI 280, PY 100, SE 212, SO 302, ED 230, ED 480, EE 220, EE 420, and a Communication Arts and Sciences course.

Teacher Certification in Health - grades 5-12

Prerequisites:

1. Major in any discipline
2. Acceptance in college and department Teacher Preparation Programs
3. Health Concentration or Health Minor for Physical Education majors, or Health Minor for other majors

Required Courses:

HE 102, HE 200, HE 300, HE 302, HE 305, HE 471, HE 480, HE 492, PE 100, BI 102, BI 280, PY 100, SE 214, SO 302, ED 220, ED 230, ED 370, ED 480, and a Communication Arts and Sciences course.

Teacher Certification in Physical Education - grades K-9

Prerequisites:

1. Acceptance in Physical Education major
2. Acceptance in college and department Teacher Preparation Programs

Required Courses:

PE 225, PE 312, PE 324, PE 326, PE 329, PE 390, PE 412, PE 492, HE 302, PY 224, ED 480

Teacher Certification in Physical Education - grades 5-12

Prerequisites:

1. Acceptance in Physical Education major
2. Acceptance in college and department Teacher Preparation Programs

Required Courses:

PE 312, PE 324, PE 329, PE 390, PE 412, PE 492, HE 302, PY 226, ED 480, 3 physical education activity courses (in addition to the major requirement)

Health Minor

The department offers a Health minor which is open to all undergraduates. The Health minor provides an opportunity for students to combine the study of Health with a major in any discipline. This multidisciplinary program approach will prepare the student for Health related careers in community based organizations, such as business, industry, hospitals, agencies that deal with health problems, health promotion, or health services.

HE 102, HE 200, HE 300, HE 400, and 3 additional courses in Health approved by the department

Students who take the Health minor and wish to be certified to teach in public schools refer to the Teacher Certification program information of the department's offerings.

GRADUATE PROGRAMS

The Health, Physical Education and Recreation Department offers programs leading to a Master of Education in Health Science, Master of Science in Physical Education, and CAGS (Certificate of Advanced Graduate Study) in Education with areas of study in Health and/or Physical Education. For CAGS details, consult the CAGS in Education section of the Catalogue.

It should be noted that certification requirements in Massachusetts are being substantially modified. This in turn is necessitating corresponding changes in program requirements of the College. Students graduating after August, 1982, should consult with the department's graduate program coordinator concerning changes in program requirements and options.

Master of Education in Health Science

This program is designed for individuals who are currently involved in health related professions or who seek to prepare for health related careers in community based organizations such as business, industry, agencies, hospitals, and voluntary and official health agencies, as well as for inservice teachers.

Applicants for this program must hold a bachelor's degree and must have, or fulfill, the program prerequisites of 6 credits in the area of Health and 6 credits in the area of Psychology.

The 31 credit graduate program of study includes:

1. GS 501 Graduate Program Planning (required of all graduate students, see *Graduate Advisors and Program Planning* in the Graduate School section of this Catalogue) — 1 graduate credit.
2. Research Methods and Findings: HE 507 Survey of Current Literature and Research in Health — 3 graduate credits.
3. Humanistic and Behavioral Studies: Consult *Graduate Program Requirements - Master of Education* in the Graduate School section of this Catalogue - 6 graduate credits.
4. Program Electives: a minimum of 21 graduate credits appropriate to the degree program and approved by the advisor. At least 15 of these elective credits, which allow students to develop their program according to their educational and career goals, must be in the area of health or related areas.

The following courses are the **only** Health courses which may be taken for the Master of Education in Health Science degree: HE 300, HE 301, and all 400 and 500 level courses, except HE 492, HE 498, and HE 499.

Master of Science In Physical Education

This program is designed for individuals who have an undergraduate major in Physical Education, or its equivalent, who wish to pursue new career directions related to the field in community based organizations, such as business, industry, agencies, hospitals, and educational settings, or who wish to enhance their undergraduate preparation through advanced study. Several program concentrations are available and are described below.

Individuals who do not have an undergraduate major in Physical Education may meet this prerequisite requirement by completing a prescribed 24 credit undergraduate course sequence in Physical Education in the College day program. Such individuals should consult with the program coordinator.

The 31 credit graduate program of study includes:

1. GS 501 Graduate Program Planning (required for all students, see *Graduate Advisors and Program Planning* in the Graduate School section of this Catalogue) - 1 graduate credit.
2. PE 506 Philosophy and Principles of Physical Education — 3 graduate credits.
3. PE 511 Survey of Literature and Research in Physical Education — 3 graduate credits.
4. Program electives: Students must elect (in addition to the above requirements) one of the following options:
 1. Concentration in Human Performance/Health Fitness:
PE 402, PE 404, PE 520, PE 595, two of the following courses - PE 403, PE 503, HE 471, HE 515 - and 3-6 credits of electives.
 2. Concentration in Adapted Physical Education:
PE 328, PE 484, PE 508, PE 595, 3 appropriate electives in the field of psychology and/or special education, and one 3 credit elective, approved by the advisor.
 3. Individualized Program of Study:
Development of a program of study, in consultation with the program advisor, to meet individual career and educational goals.

The following courses are the only Physical Education courses which may be taken for the Master of Science in Physical Education degree:

PE 328, PE 340, PE 402, PE 403, PE 404, PE 410, PE 411, PE 413, PE 439, PE 440, PE 445, PE 446, PE 447, PE 448, PE 450, PE 470, PE 471, PE 472, PE 474, PE 475, PE 479, PE 481, PE 482, PE 484, PE 487 and all 500 numbered courses.

COURSE OFFERINGS*

HEALTH

HE 102 Health Science

3 crs.

Attitudes and practices as they influence effective living; common adult health problems, community health standards and services; special problems of concern in the area of community health.

HE 200 Principles and Practices of Health Education

3 crs.

Prq.: HE 102

Selection of content for health courses with emphasis on current trends; analysis of the learning and teaching process as applied to health education.

HE 300 Current Issues in Health

3 crs.

Prq.: HE 102

Designed to acquaint the students with current health issues and trends related to the school and community.

HE 301 Human Sexuality

3 crs.

Investigation of latest research relating to human sexual response, sexual attitudes and sexual values. Topics covered will also include homosexuality, masturbation, venereal disease, prostitution, abortion, birth control, premarital and extra marital relations.

HE 302 First Aid and Safety

2 crs.

Practical application of techniques used to care for the suddenly ill or injured. Successful completion will result in American Red Cross certification. Safety principles and practices will also be covered.

HE 305 Drugs in Society

3 crs.

Study of the impact of the environmental and cultural values affecting the drug using population. Views on subculture and alternative life styles and the forces that shape them. Understanding trends of modern treatment facilities and rehabilitation procedures. Emphasis on alternatives to drug use.

HE 390 Field Based Pre-Practicum — Health Education

3 crs.

Designed to provide the student with an introduction to teaching health in an off campus setting.

HE 400 Development and Administration of Health Programs

3 crs.

Prq.: HE 102, HE 200 or HE 300 or permission of the instructor for Graduate students

Study and analysis of administrative roles and responsibilities associated with the implementation and evaluation of health education programs in various community organizations and agencies within the health system.

HE 471 Nutrition

3 crs.

Nutrition and its relation to cultural patterns, dental health, total health and fitness, weight control and purchasing and preparation of food.

HE 474 Community Health

3 crs.

The history and development of public health programs, the relationships of health departments — local, state and federal — public and private agencies, and the school health program. Problems and principles of the community health programs based on local needs. Designed for classroom teachers, health specialists, and others interested in community health.

*See page 83 for general information regarding course offerings.

HE 475 Theoretical Basis of Health Instruction

3 crs.

Prq.: 6 credits in Health

Investigation and student utilization of new and innovative teaching techniques. Philosophy and content of health instruction is considered. Learning theories, behavior modification theories, and decision making exercises will be explored and practiced.

HE 477 Environmental Health

3 crs.

Study of selected environmental influences, and how they affect health. Proposal and action oriented suggestions for bringing about change. Understanding pressure tactics, political influences, resistive forces and strategies for dealing with them. Exploration of legal structure, geographical difficulties, priority establishment and safety tolerances.

HE 478 Consumer Health

3 crs.

Course designed to help people make informed decisions regarding their best use of health products and services. Topics to be covered include health insurance, life insurance, credit buying, quacks, patent medicines, fad diets, food buying, criteria for selecting health service, identifying subtleties in advertising and understanding the misconceptions concerning health.

HE 479 Health Problems

3 crs.

Prq.: 6 credits in Health

Current health problems relating to the school and community will be presented. Topics will be based on needs and interests of class participants. The school's responsibility for education in these areas will be discussed.

HE 480 Family Life and Sex Education

3 crs.

Professional preparation for teachers of family life and sex education. Determining curriculum, overcoming administrative and parental objections, dealing with specific problems of school age youth such as birth control, venereal disease, psychological and social aspects of sexuality.

HE 481 Selected Health Issues

1-3 crs.

Designed to bring to the educator the latest information regarding selected health issues. Three issues will be offered each time the course is given and experts in the field will be brought in to deal with each topic. Given in modular form for 1-3 credits.

HE 482 Health Education in the Elementary Schools

3 crs.

Study of the identification and appraisal of physical, emotional, and social health problems of elementary school children. Focus on teacher's approaches toward health education and the creation of an emotionally, socially and intellectually healthy classroom environment.

HE 483 Nutrition and Cardiovascular Health

3 crs.

Prq.: One course in nutrition or a scientifically based course that includes topics of nutrition
This course will deal with the selection of nutritional foods throughout the life cycle with specific emphasis on how cardiovascular health may be maintained and/or improved by proper nutritional practices.

HE 484 Death and Dying Education

3 crs.

A study of the health issues (physical, emotional and social) related to terminal illness and death.

HE 492 Practicum in Student Teaching — Health

15 crs.

Prq.: Acceptance and good standing in Teacher Preparation program and satisfactorily completed Department Teacher Preparation program courses
Full-time teaching for one semester with supervision provided by members of the department faculty.

HE 498 Field Experience in Health

3-15 crs.

Prq.: Consent of the Department

A field experience offers qualified students the opportunity to gain practical off-campus experience in the area of health. Placements are made in both public and private agencies and are designed to complement a student's concentration or minor in health.

HE 499 Directed Study in Health

1-3 crs.

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

HE 502 Research

credit to be arranged

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

HE 503 Directed Study

credit to be arranged

Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

**HE 507 Survey of Current Literature and
Research in Health**

3 crs.

Prq.: A minimum of 15 credit hours in the Master of Education in Health Science degree program. This course will enable students to more critically consider recent research and current opinions of those leaders in the field who write about health education. Article writing and reviewing will be encouraged and aided. Journals in sociology, psychology, paramedical education as well as health will be considered. This course will also aid in selecting and defining a thesis topic.

HE 508 Health Crisis Intervention

3 crs.

Prq.: 6 credits in Health

Dealing with mental, emotional and social health problems of the individual, the family and society. Exploration of suicide education, death education and psychosomatic illness. Investigation and practice of techniques of aiding potential suicide, tripping drug user, chronic alcoholic, obese, neurotic, promiscuous, geriatric problems and health care availability. Course will consider agency roles in these areas.

HE 511 Evaluation of School Health Programs

3 crs.

Prq.: 12 credits in Health

Study of the total school health program. Construction and application of an instrument to determine extent of program. School visitations are included.

HE 512 Humanistic Approach to Drug Education

3 crs.

A humanistic approach to drug education with emphasis on: available resources, educational modalities, effecting curriculum change, the communication process, attitudes and values, and teaching methods. Lecturers will include experts from the field of drug education.

HE 513 Cultural Approaches to Health

3 crs.

Prq.: 3 credits in Sociology

Anthropological, sociological, psychological and physiological factors related to health behavior of sub-cultured groups. Concerns health knowledge, attitudes, values and behavioral practice of various religious and ethnic groups.

HE 514 Selected Topics in Environmental Health

3 crs.

An in-depth study of important environmental health issues. The topics discussed will provide the information needed to make intelligent decisions regarding critical environmental health problems.

HE 515 Nutrition and Cardiovascular Health

3 crs.

Prq.: One course in nutrition or a scientifically based course that includes topics of nutrition. This course will deal with the selection of nutritional foods throughout the life cycle with specific emphasis on how cardiovascular health may be maintained and/or improved by proper nutritional practices.

PHYSICAL EDUCATION

PE 100 Anatomy 3 crs.

Includes a fundamental study of the human body and its parts, with special emphasis on bones, muscles, and tissues.

PE 101 Kinesiology 3 crs.

Prq.: PE 100

Detailed anatomical and mechanical analyses of fundamental motor skills.

PE 117 Foundations in the Study of Human Movement 3 crs.

An historical study of the development of man and movement will be undertaken with emphasis on the biological, psychological, sociological, cultural and philosophical implications. This course is designed to lay the foundation and provide for the understandings necessary to approach the study of physical education as a discipline in the twentieth century.

PE 201 Apprenticeship in Exercise Science/Health Fitness 1 cr.

The course is an introductory field work experience in the design and conduct of preventive and rehabilitative exercise programs. In addition to the class work, the student will observe and assist in the operation and supervision of an established program.

PE 217 Principles of Motor Learning 3 crs.

Introduces the student to the concepts and principles concerned with learning and performance of movement skills.

PE 220 Expressive Movement 3 crs.

Creative exploration of individual and group movement to develop the kinesthetic sense and its artistic use. These movement experiences will help the individual's projection of self in his interaction and communication with others.

PE 225 Teaching Educational Dance, Games and Gymnastics to Children 3 crs.

An introduction to the movement approach to dance, games and gymnastics with emphasis on program content and progression using the thematic approach.

***PE/CT 226 Creative Dance I 3 crs.**

The study of dance, as the Art of Movement. Included are basic exercise, individual and group dance based on polarities of force, impulse, time, space, vocal and instrumental sound.

PE 230 Introduction to Recreation 3 crs.

The history of recreation from primitive man to the present. Philosophies of recreation, leisure, work and play are presented. Recreation services and career opportunities are discussed. Professional organizations and literature are reviewed.

PE 240 Fundamentals of Athletic Training 3 crs.

Organizational and operational features, role and responsibilities of the athletic trainer and principles of athletic fitness will be included. The classroom experience will be enhanced by personal observation of the training room.

PE 310 Physical Education for Adults 3 crs.

An analysis of Physical Education programs planned specifically for meeting the sociological, psychological, and physiological needs of adults and senior citizens. Opportunities will be provided for the observation of existing programs.

*Offered for credit in both the Health, Physical Education and Recreation and the Speech Communication, Theatre Arts and Communication Disorders Departments.

PE 312 Strategies and Analysis in Teaching Physical Activities 3 crs.

Prq.: PE 101, PE 217

Designed to prepare the student with an understanding of the learning and development of skill performance in a variety of environments. Major emphasis will be placed on learning progressions, organizational patterns, teaching strategies and cues, skill analysis, error correction and performance evaluation of activities.

PE 320 Physical Education for the Elementary Classroom Teacher 3 crs.

A study of the philosophy and objectives of the elementary school physical education program. Emphasis on the role and responsibilities of the classroom teacher in the program with laboratory experiences teaching children.

***PE/CT 321 Creative Dance for Children 3 crs.**

Prq.: One three credit dance course or consent of the Instructor

The study and experience of Dance as a creative art activity for children. For those planning to work with children in schools, camps, community centers, or enrichment programs.

PE 324 Developmental and Adapted Physical Education 3 crs.

Prq.: PE 217

A course designed to provide students with basic knowledge and skills to plan, implement, and evaluate motor development and physical education programs for Special Needs Children and Youth. Emphasis is placed on the study of learning disabilities, mental retardation, sensory disorders, orthopedic disabilities, body mechanics disorders and nutritional disturbances. Opportunities for practicum experiences are of primary importance. Observations and tours of local agencies and schools are included.

***PE/CT 325 Creative Dance II 3 crs.**

Prq.: One 3 credit dance course or consent of the Instructor

Study of impulse, design, metric patterns, dynamic qualities of dance, accompaniment and elements of performance through improvisation and composition. Emphasis will be on increased artistry in the development and presentation of individual and group dances.

PE 326 Fundamentals of Movement Education 3 crs.

Analysis and application of components of Movement Education for Early Childhood through the primary grades.

PE 328 Advanced Study of Motor Programs for Special Needs Children and Youth 3 crs.

Prq.: Undergraduate: PE 217 and PE 324; Graduate: PE 484 and PE 508 or Consent of the Instructor

Included is the study of nutritional disturbances, emotionally disturbed, socially maladjusted, disadvantaged, and chronic medical problems. A culmination of professional experiences to include a study of perceptual motor programs, behavior modification, advanced techniques of motor assessment and grantmanship. The role of the adapted physical educator as a resource and itinerant teacher will be presented.

PE 329 Physical Education for Middle and Junior High School Children 3 crs.

Prq.: PE 101, PE 217

This course will focus on program objectives, strategies and analysis of teaching physical education in the middle and junior high school. Course will include pre-practicum experiences focusing on program content, progressions and teaching skills commensurate with the play education model.

*Offered for credit in both the Health, Physical Education and Recreation and the Speech Communication, Theatre Arts and Communication Disorders Departments.

PE 330 Theory and Principles of Recreation 3 crs.

A course designed to provide the student an opportunity to explore the impact of leisure on the society and the individual. Various economic, educational, social and psychological phenomena and the force each has on leisure is examined.

PE 331 Outdoor Recreation Resources 3 crs.

Study of the design, effective use, management and programs of outdoor recreation and conservation areas.

PE 332 Leadership and the Group Process 3 crs.

This course provides theory and experiences necessary to develop an understanding of leadership, group dynamics and effective group skills.

PE 333 Camp Leadership and Organized Camping 3 crs.

A study of organized camps and camping programs with particular emphasis on program planning, selection and training of staff, and administrative details in organized camping.

PE 340 Principles and Practices in Athletic Training 3 crs.

Prq.: PE 240

Recognition, understanding, and management of athletic injuries, sound conditioning and rehabilitation programs, the use of therapeutic modalities, as well as a laboratory section covering protective equipment and practice in taping and bandaging.

***PE/CT 350 Movement in the Creative Arts 3 crs.**

Dance, the art of movement, in its relationship to drama, music, speech, and the visual arts. Creative experiences in each of these areas directed by divisional staff.

***PE/CT 352 Dance History 3 crs.**

Examination of dance from an historical perspective: movement, themes, composition, and accompaniments as expressive of specific western cultures. Re-creation of individual and group dances from selected historical periods.

PE 390 Field Based Pre-Practicum — Physical Education 3 crs.

Designed to provide the student with an introduction to teaching physical education in an off campus setting.

PE 401 Physiology of Exercise 3 crs.

Prq.: BI 280

Includes the study of various systems, their interrelationships and adjustments during exercise and as a result of training. Emphasis is on current research findings and what remains to be discovered in man as a moving being. 2 hours lecture and 2 hours laboratory.

PE 402 Physiology of Exercise II 3 crs.

Prq.: PE 401 or equivalent

An in-depth study of human physiological principles as applied to exercise, sport activity and research. Special emphasis is on neurological control, exercise in relation to cardiovascular disease, and factors affecting performance.

PE 403 Cardiovascular Function, Analysis and Evaluation 3 crs.

Prq.: PE 401 or equivalent

Includes cardiovascular dynamics as studied through anatomy, electrophysiology, and the pathology of the cardiovascular system. Specific emphasis will be placed on the analysis of the cardiovascular system through non-invasive methods of evaluation.

*Offered for credit in both the Health, Physical Education and Recreation and the Speech Communication, Theatre Arts and Communication Disorders Departments.

PE 404 Exercise Prescription and Cardiac Rehabilitation 3 crs.

Prq.: PE 401 or equivalent

This course focuses on the development of individualized prescriptive exercise programming with regard to stress test evaluations and individual contra-indications. Environmental conditions along with intensity, duration and frequency of physical activity will be studied in order to develop programs. Special attention will be given to high risk populations and post cardiac patients.

PE 410 Physical Education in Agency Programs 3 crs.

In depth study of physical education within the social agency setting with emphasis on program development and instruction supplementing the normal school program.

PE 411 Organization and Administration of Health, Physical Education and Recreation 3 crs.

Development of policies, administrative practices, interfaculty and interstaff relationships, supervision, public relations, fiscal practices, development and use of facilities.

PE 412 Planning, Implementation, and Evaluation in Teaching Physical Education 6 crs.

Designed to develop teaching competencies related to the planning, implementation, and evaluation aspects of instructional programs in physical education. To provide methods of enhancing teacher-pupil behaviors and creative learning environments.

PE 413 Current Issues in Physical Education 3 crs.

The examination and description of contemporary forces and trends in education and their implications for physical education. Opportunities will be available for students to present orally and in writing ideas relevant to professional concerns.

PE 414 Coaching 3 crs.

The application of teaching and learning principles as related to the player, team, coach and the athletic program. Areas to be included will be psychology and philosophy of coaching, organization and administration of the program, coaching techniques, conditioning and evaluative procedures.

PE 415 Methods and Techniques in Coaching Baseball 1 cr.

Offensive and defensive fundamentals, offensive and defensive team play and administration.

PE 416 Methods and Techniques in Coaching Basketball 1 cr.

The theory and practice of basketball coaching; including the study of offensive and defensive systems, drills, training and conditioning of basketball squads.

PE 417 Methods and Techniques in Coaching Football 1 cr.

History of football, fundamentals of line and backfield play, team defense and offense, field generalship, scouting, athletic injuries; and study of rules.

PE 420 Methods and Techniques in Coaching Lacrosse 1 cr.

The theory and practice of lacrosse coaching; including the study of offensive and defensive fundamentals and systems, drills, training and conditioning of Lacrosse squads.

PE 421 Methods and Techniques in Coaching Soccer 1 cr.

Teaching the skills of kicking, trapping, heading, dribbling, tackling, throwing; defensive and offensive soccer.

PE 422 Methods and Techniques in Coaching Track and Field 1 cr.

How to train for track and field events. Form and technique in track and field.

PE 423 Methods and Techniques in Coaching Swimming 1 cr.

Open to all students who have an American Red Cross Senior Life Saving Certificate. Emphasis placed on organizing, developing, and training swim teams on the age group and high school level.

PE 424 Methods and Techniques in Coaching Wrestling 1 cr.

Fundamentals in free-style wrestling with emphasis on basic maneuvers. Theory and practice work.

PE 425 Officiating Baseball 1 cr.

Rules and techniques in officiating baseball; organizations of officials; practical experience.

PE 426 Officiating Basketball 1 cr.

Techniques of officiating basketball. Practical as well as theoretical examinations are included with opportunity to earn a recognized rating.

PE 427 Officiating Football 1 cr.

Rules and techniques in officiating football; organizations of officials; practical experience.

PE 428 Officiating Soccer 1 cr.

Rules and techniques in officiating soccer; organizations of officials; practical experience.

PE 429 Officiating Field Hockey 1 cr.

Techniques of officiating field hockey. Practical as well as theoretical examinations are included with opportunity to earn a recognized rating.

PE 431 Officiating Volleyball 1 cr.

Techniques of officiating volleyball. Practical as well as theoretical examinations are included with opportunity to earn a recognized rating.

PE 439 Analysis and Application of Teacher Behavior 3 crs.

Analysis of verbal and non-verbal teaching behavior through direct observation techniques with focus on the teaching of health and physical education. Course will include specific categories of teaching behavior and styles of teaching, review of the literature related to teaching effectiveness, direct observation of teaching and micro-teaching.

PE 440 Scientific Basis of Coaching 3 crs.

Examination of the physiological considerations and mechanical principles in coaching both individual and team sports. Emphasis will be on training and the improvement of skill.

PE 445 Adventure Programs 3 crs.

The planning and development of adventure and challenge programs in physical education and related disciplines. Students will be involved in theoretical and practical aspects of adventure curriculums and will be expected to participate in a variety of activities, primarily in the out of doors. Topics will include backpacking, rock climbing, orienteering, winter camping, survival, and ropes course activities.

PE 446 Advanced Adventure Programs 3 crs.

Prq.: PE 445 or equivalent experience

This course builds on basic adventure program knowledges and skills and includes the development of new knowledge and skills of an Outward Bound nature, culminating in a 7 day expedition which will take place during an academic vacation period.

PE 448 Man and Movement: Humanistic Perspectives in Sport and Physical Education 3 crs.

Prq.: Involvement in Physical Education or athletics as a coach or instructor

This course, which will be conducted with seminar format, will explore the humanistic dimensions of sport and physical education. The framework for the course will be provided by an overview of the nature of a humanistic physical education and sport program. Participants will review some of the factors that currently hinder humanistic models in structured movement programs. These negative factors will be contrasted with some alternative, more positive visions of physical education and sport, visions that give evidence of the role of structure movement in evolving a more humane society and "self-actualized individual."

PE 450 Administration of Athletic Training 3 crs.

Prq.: PE 240

Budget and equipment/supply inventory, operational policies and procedures, record-keeping, liability of the athletic trainer and preparation for an athletic contest.

PE 460 Park and Recreation Facilities 3 crs.

A study of planning, development, and maintenance of parks and recreation facilities, includes inspection of areas and preparation of plans.

PE 461 Organization and Administration of Public Recreation 3 crs.

Organization and administration of recreation at federal, state and local levels; legislative provisions, governmental control, financing, budget, personnel, departmental organization, and administrative practices.

PE 462 Programming for Recreation and Leisure 3 crs.

The opportunity to plan, conduct, evaluate and observe a wide variety of both on-campus and community based programs and activities.

PE 463 Field Problems in Recreation 3 crs.

Prq.: Permission of Instructor

A study of selected problems in various areas of recreation through guided individual and group field experience.

PE 465 Play Theory and the Play Environment 3 crs.

Provides theoretical foundations for play based on classical and modern theories and on research findings.

PE 468 Programs in Recreation 3 crs.

The fundamental aspects of program planning in recreation. The programs of various agencies, both public and private, will be discussed. Items given special attention are: Senior Citizens Programs, Physically and Mentally Retarded Programs and Pre-primary Programs.

PE 470 Sociology of Sport 3 crs.

Prq.: 3 credits in Sociology

Examination and analysis of the types of forces at work in American society and how they relate to sports. Among the topics to be included are the influences of our cultural heritage, philosophy of education, politics, religion, economy, ethnics, mass media, and internationalism. Lectures, readings, class discussions, and written assignments will be directed toward enhancing the individual's understanding of the values of sport in our society yesterday, today, and tomorrow.

PE 471 Psycho/Social Aspects of Sports 3 crs.

Prq.: PY 100, SO 202

This course is designed to provide for a study of the relationships between sport activities and the psychological nature of man as a study in the sociocultural process.

PE 472 Measurement and Evaluation in Physical Education 3 crs.

Prq.: MA 110 or its equivalent

The construction and use of written tests, skills tests, and other measurement devices in physical education, methods of administration and use of data.

PE 474 Teaching and Calling the Modern Square Dance 3 crs.

Make-up and place of modern square dance in the physical education curriculum. Basics included in the modern square dance will be presented in progression. The techniques of teaching will be emphasized as students are taught to perform these fundamentals. The method of learning to call individual basics will be stressed and emphasis placed on the mechanics and function of each.

PE 475 Games Leadership Workshop 3 crs.

This workshop is designed for people interested in building relationships through play in games. The games emphasis will move away from the familiar competitive, play experience to the non-competitive, supportive and cooperative play experience. Participants will develop a repertoire of games suitable for all ages. Leadership competence will provide participants with the tools to take games to others in schools, business, community groups and the family.

PE 479 Problems in Physical Education and Athletics 3 crs.

The recognition, discussion, and systematic analysis of controversial issues and problems. Topics studied are: optimum use of facilities, ethical practices, finance relationships with nonschool programs, interscholastic athletic competition below high school level, youth fitness, crowd control, injury prevention, program evaluation, and community organization for health, physical education and recreation.

PE 481 Organization and Administration of School Athletics 3 crs.

Athletic policies and regulations on the local and state levels, administrative plans, contest management, the purchase and care of equipment, athletic awards, finance and budget, athletic facilities, scheduling, public relations, the intramural program, and trends in interscholastic athletics.

PE 482 Public Relations in Physical Education 3 crs.

The study of a public relations philosophy, as well as specific and practical techniques. Planning and preparation of annual reports, speeches, brochures, displays, demonstrations and press releases. Course projects are planned to help upgrade the public relations programs in the departments and schools represented.

**PE 484 Physical Education for Special Needs
Children and Youth 3 crs.**

The planning and development of physical education programs considered appropriate to the needs, interests and abilities of exceptional children and youth. Emphasis will be placed on the contribution that physical education can make to the education and well being of the physically, mentally and emotionally handicapped child.

**PE 485 Integration of Physical Activity:
Home, School and Community 3 crs.**

Provides an awareness of potential interrelationships between classroom, home, and community environments with physical education activities.

PE 487 Psychological Aspects of Coaching 3 crs.

Prq.: PY 100

Emphasis on coach-player relations, dealing with motivation, the coach and his personality, common problems in coaching, and evaluating the players.

PE 490 Orthopedic Assessment in Athletic Training

2 crs.

Prq.: PE 240 and PE 340

To acquaint students with the interests, areas of expertise, and function of the Orthopedic Surgeon so that the student can make appropriate and informed referral to the physician. Clinical examination of the musculo-skeletal system through the use of case studies will be demonstrated. Emphasis will be placed on history taking, utilization of diagnostic testing, surgical procedures performed, and prognosis. Course will include visiting lecturers from the medical profession.

PE 492 Practicum in Student Teaching — Physical Education

15 crs.

Prq.: Acceptance and good standing in Teacher Preparation Program and satisfactorily completed Department Teacher Preparation program courses

Full-time teaching for one semester with supervision provided by members of the department faculty.

PE 498 Field Experience in Physical Education

3-15 crs.

Prq.: Consent of the Department

A field experience offers qualified students the opportunity to gain practical experience within their major. Placements are made in both public and private agencies and are designed to complement a student's concentration within the major.

PE 499 Directed Study in Physical Education

1-3 crs.

Prq.: Consent of the Department

Open to all juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

PE 502 Research

credit to be arranged

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

PE 503 Directed Study

credit to be arranged

Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

PE 505 Principles and Techniques of Supervising Student Teachers in Physical Education

3 crs.

Prq.: Public School Teaching

A course designed to provide physical education teachers with knowledge relating to the nature of supervision, the role of the cooperating teachers and their impact on student teachers, methods for observing and recording teaching behaviors and suggestions for helping student teachers implement instructional strategies. Theoretical and practical experience will be provided.

PE 506 Philosophy and Principles of Physical Education

3 crs.

Prq.: 6 credits in Physical Education

Philosophical inquiry into the discipline of physical education including a study of trends and forces in education as they affect the field.

PE 507 The Child and His Movement Behavior

3 crs.

Prq.: 12 credits in Physical Education or permission of the Instructor

Current concepts and trends related to movement experiences of children with emphasis on developmental movement, and learning.

PE 508 Motor Learning 3 crs.

Prq.: 3 credits in Psychology

Integration of biological and psychological concepts in the acquisition of motor skills including environmental conditions, developmental factors and learning theories.

PE 509 Mechanical Analysis of Movement 3 crs.

Prq.: A course in Physics or Kinesiology

Scientific principles applied to human motion with emphasis on the analysis of human movement for the purpose of improving teaching and coaching techniques.

PE 510 Concepts of Curriculum Development 3 crs.

Prq.: 9 credits in Physical Education or permission of the Instructor

Current educational trends, theories relative to physical education and the development of curricular models, with a focus on the needs of today's society.

PE 511 Survey of Literature and Research in Physical Education 3 crs.

Prq.: A minimum of 15 credit hours in the Master of Science in Physical Education Degree program required before taking this course

This course is designed to aid students in critiquing research and opinion in the field of physical education. Journals which contribute to the body of knowledge in physical education will be utilized. Students will be required to write articles, and select and define a research topic.

PE 512 Administration of Physical Education 3 crs.

Prq.: 12 credits in Physical Education or permission of the Instructor

Application of administrative principles to the physical education program.

PE 513 Educational Games for Elementary and Middle School Level 3 crs.

A comprehensive study of the movement approach to educational games with emphasis on analysis of games. Progression utilizing thematic approach and curriculum development will also be presented.

PE 514 Improving Teaching Effectiveness in Physical Education 3 crs.

Prq.: Public School Teaching Experience

The course will focus on the techniques for observing and analyzing teacher and student behavior, the application of classroom management techniques and the study of teacher effectiveness research. A format through which teachers can gather data for use in self analysis and improvement of instruction will be examined.

PE 520 Exercise and Health Fitness Program Development 3 crs.

Prq.: At least one course in exercise physiology or permission of the Instructor

Designed to address strategies essential to the development of successful exercise and health fitness programs. Emphasis will be placed on program development, motivational techniques and administrative considerations.

PE 521 Child's Play — A Learning Medium 3 crs.

Provides a vehicle for discovering the relationship between the developing pre-school child and the world of play. Adults involved with children in any capacity will become familiar with the contributions of play to the child's mastery of self and the environment. The effect of play on psychomotor, affective and cognitive development will be considered.

PE 540 Sports Injuries: Prevention and Care 3 crs.

An introduction into the theories and principles surrounding the care and prevention of athletic injuries. Classroom study will include pre-season conditioning programs, protective equipment, acute emergency injury and illness care and prophylactic techniques.

PE 545 Physical Conditioning and Training in Sports and Exercise

3 crs.

Prq.: Introductory course in exercise physiology or permission of the Instructor
This course is designed to provide the sport practitioner, i.e., the coach, athlete, team trainer, and physical educator with a basic understanding of the physiologic principles underlying the physical conditioning process. Methods of planning, implementing and evaluating training programs will be the main focus of attention.

PE 595 Internship in Physical Education

1-6 crs.

Prq.: 12 graduate credits of physical education and permission of advisor
An internship offers qualified students the opportunity to gain substantial practical experience within their major. Placements are designed to complement a student's program concentration.

PHYSICAL EDUCATION ACTIVITY COURSES

Physical Education Activity courses are offered on a quarter or semester basis for the following credit: 1.0 credit for a three hour quarter course; 2.0 credits for a three hour semester course. A maximum six credit hours in physical education courses may be used toward graduation (this does not apply to physical education majors).

Archery I — Beginner

Concepts and fundamental skills of archery including methods of aiming, scoring, and introduction to novelty events.

Archery II — Intermediate

Prq.: Archery I or comparable experience

A follow up of Archery I with emphasis on increased skill and consistency, and an introduction to field and tournament play.

Badminton I — Beginner

Fundamental skills, rules and game concepts in order to prepare students for satisfying play experiences.

Badminton II — Intermediate

Prq.: Badminton I or comparable experience

A follow up of Badminton I with emphasis on advanced skills, singles and doubles play, and game strategy.

Baseball/Softball

Concepts and fundamental skills of the games including rules and strategy of play.

Basketball — Beginner

Fundamental skills of basketball, elementary offense and defense strategies.

Basketball II — Intermediate

Prq.: Basketball I or comparable experience

A follow up of Basketball I with emphasis on advanced strategy and game play.

Bicycle Touring

An understanding and appreciation for the sport of cycling through the application of body mechanics, cycling techniques, knowledge of multigeared bikes and the many aspects of touring. Students must have a 10-speed bike.

Bowling I — Beginner

Concepts and fundamentals of bowling; approach, delivery, follow through, and strategy of play. \$3.00 per week fee, approximately.

Bowling II — Intermediate

Prq.: Bowling I or comparable experience

A follow up of Bowling I with emphasis on increased skill and consistency. \$3.00 per week fee, approximately.

Canoeing I

Instruction in fundamental skills of canoeing, and small craft safety techniques.

Conditioning

Concepts, exercises and activities related to the development of physical fitness, including isometrics, weights and running.

Creative Modern Dance I

Problems in basic forms, movement impulse, design in movement, construction and use of musical instruments in dance. Emphasis on increased awareness, freedom and control of the individual and group.

Creative Modern Dance II

Prq.: Creative Modern Dance I or consent of the Instructor

Dance studies based on the exploration of space-direction, line, plane, level and dimension, verbal accompaniment to prose and poetry, force-action and interaction, dance and music, also includes leading and directing group dance.

Dance Technique

Prq.: PE 157 (Movement and Relaxation) or consent of the Instructor

Rhythmic exercises such as stretching, bending, swinging, twisting, falling, leaping, and jumping, sequences based on combinations of the above to increase awareness, skill and control of movement.

Folk Dance

Folk dance terminology, formations, and dance steps. Course will include insight into the background and customs of the people in the countries where the dances originated.

Square Dance Calling

This course is designed to acquaint the student with the knowledge and skills needed to call, create, and teach square dance. It includes timing and phrasing of the music, analysis of dance composition, pattern and singing calls, and construction of progressions for teaching novice dancers.

Survey of Dance

Introduction to Dance as the Art of Movement, exploration and expressive use of force, time, and space, elements common to Dance and all movement in daily activities, sports, drama and music.

Fencing I — Beginner

Concepts and fundamental skills of fencing including defense, feints, lunges, parries, reposts, and disengages.

Fencing II — Intermediate

Prq.: Fencing I or comparable experience

A follow-up of Fencing I with emphasis on compound attacks, counter parries, and strategies in bouting.

Field Hockey I

Development of basic skills, concepts and strategies for playing the game with understanding and application of rules.

Field Hockey II

A follow up of Field Hockey I with emphasis on increased proficiency of performance and game strategy.

Flag Football

Concepts and fundamental skills of the game including rules and strategy of play.

Golf I — Beginner

Concepts and fundamental skills of the game including rules and scoring. A minimal fee of approximately \$3.00 for use of facilities will be charged.

Golf II — Intermediate

Prq.: Golf I or comparable experience

A follow up of Golf I with emphasis on increased skill and strategy of play.

Gymnastics

Concepts and fundamental skills of vaulting, balance beam, parallel bars, uneven parallel bars, high bar, side horse, rings and free exercise.

Lacrosse I

Concentration on the basic skills of the sport and on the elementary form of the game.

Lacrosse II

Refinement of lacrosse skills, further development of game strategy, optimal exposure to officiating techniques.

Movement and Relaxation I

Theories and techniques of Yoga and relaxation, and basic movement related to daily activities.

Movement & Relaxation II

A continuation and follow up of Movement and Relaxation I with more advanced exercises emphasizing Hatha Yoga and including sequences of movement, work in relaxation, breath control, balance, endurance and general coordination.

Skiing I — Beginner

The beginner skills of side stepping, kick turn, herringbone, straight running, snowplow, snowplow turns, traverse, stem turns, and safety aspects of the sport. Equipment is supplied. A minimal charge of approximately \$5.00 will be charged for use of off-campus facilities.

Ski Touring

Introduction to basic skills and knowledge of Ski Touring. Instruction in choosing equipment, waxing, touring techniques and conditioning.

Soccer

Fundamental skills of soccer including: kicking techniques, trapping, heading, offensive and defensive strategy and rules of the game.

Softball

Fundamental skills of softball, rules and strategy.

Senior Life Saving

Prq.: Swimming II or comparable experience

Theory and skills of senior life saving. Satisfactory completion of the course entitles students to Red Cross Senior Life Saving Certificate.

Scuba Diving

Prq.: Swimming II or comparable experience, physical examination

The fundamentals of skin and scuba diving. Emphasis on safety using the self contained underwater breathing apparatus.

Swimming I — Beginner

Beginning swimming skills building toward proficiency in the water including crawl, elementary back stroke, and water safety.

Swimming II — Intermediate

Prq.: Swimming I or comparable experience

Refinement of skills of Swimming I and introduction of breast stroke, side stroke and beginning diving.

Swimming III — Advanced

Prq.: Swimming II or comparable experience

Analysis and refinement of all swimming strokes and diving techniques and introduction of advanced skills.

Synchronized Swimming

Prq.: Swimming II or comparable experience

Swimming and diving skills and stunts choreographed to music.

Water Polo

Includes basic movements, skills, and maneuvers of the sport of water polo with emphasis on offensive and defensive fundamentals and strategies, practical drills, rules, and regulations.

Water Safety Instructor

Prq.: Current American Red Cross Senior Life Saving Certificate

Instruction in advanced aquatic skills and teaching methods. Students who demonstrate a high level of skill and the necessary teaching attitude will receive Red Cross Certification as Water Safety Instructors.

Tennis I — Beginner

Concepts and fundamental skills of tennis including forehand, backhand, serve, rules and strategy of singles and doubles play.

Tennis II — Intermediate

Prq.: Tennis I or comparable experience

A follow up of Tennis I with emphasis on volley, lob, smash, and game strategy

Tennis III

Advanced strategies of singles and doubles play and participation in advanced competition.

Track & Field

Skills of track and field including running, jumping, throwing events, and their progressions.

Volleyball I — Beginner

Concepts and fundamental skills of volleyball, team play, rules and game strategy

Volleyball II — Intermediate

Prq.: Volleyball I or comparable experience

A follow-up of Volleyball I with emphasis on increased proficiency of performance and game strategy.

Wrestling

Fundamentals of college wrestling with emphasis on mat skills, rules, scoring and strategy.



Department of High School, Middle School, and Adult Education

Professor Robert E. Fitzgibbons, Chairperson
and Graduate Program Coordinator

Professor Robert Mogilnicki

Associate Professors: David Englund, Paul Kelley,
Leo McGuirk, Raymond ZuWallack

UNDERGRADUATE PROGRAMS

The Department of High School, Middle School, and Adult Education provides students with the theoretical and practical knowledge necessary for becoming effective teachers at the appropriate level. The curriculum includes a detailed consideration of contrasting modes and strategies of teaching and of the psychological theories and philosophical reasons justifying their appropriateness. Theory is related to practice by means of microteaching, role-playing, other simulation activities and teaching in area schools. Students gain additional practical experience through tutoring students, assisting or observing teachers, and student teaching at the appropriate level in area schools.

The Department offers a minor in High School Education. A student selecting this minor must in addition select a major in an appropriate academic discipline. The major requirements for each academic discipline, including cognates and the high school education minor, are described on following pages.

All students in a teacher education program must apply for admission, and be accepted in, the Teacher Education Program. Information on the Teacher Education Program may be found in the introductory section of the Division of Professional Education.



High School Education Minor

The High School Education Minor is designed for students desiring to qualify for one of the following specialized teaching certificates:

Teacher of Art	Gr. 5-12	Teacher of French	Gr. 9-12
Teacher of Behavioral Sciences	Gr. 9-12	Teacher of Geography	Gr. 9-12
Teacher of Biology	Gr. 9-12	Teacher of History	Gr. 9-12
Teacher of Chemistry	Gr. 9-12	Teacher of Mathematics	Gr. 9-12
Teacher of Drama	Gr. 5-12	Teacher of Physics	Gr. 9-12
Teacher of Earth Science	Gr. 9-12	Teacher of Social Studies	Gr. 9-12
Teacher of English	Gr. 9-12	Teacher of Spanish	Gr. 9-12
		Teacher of Speech	Gr. 9-12

In addition to majoring in an appropriate academic discipline (see below, *Major Requirements for Education Minors*), the student must also complete the High School Education minor.

High School Education Minor:

ED 220, ED 230, ED 240, ED 360, ED 370, an appropriate course from the group ED 412-426; ED 490 and SE 214

Major Requirements for Education Minors

Students desiring to complete a minor in High School Education must also complete an academic major. Appropriate academic majors, along with major and cognate requirements, are listed below. It is important to note that in many cases the major or cognate requirements for students selecting an Education minor are somewhat different from those that hold for students who do not minor in Education. For instance, some majors require two years of a foreign language for non-Education minors, but there is no foreign language requirement for Education minors having the same major.

Anthropology (Teacher of Behavioral Sciences 9-12)

Major courses: AN 201, AN 202, AN 210, AN 302 or AN 321, AN 323 or AN 333, plus three Anthropology electives.

Cognate courses: BH 201, SO 302, SO 303 or SO 312, PY 100, PY 244 or PY 226, HI 221, HI 413, HI 427 or HI 476

Art (Teacher of Art 5-12)

Major courses: AR 120, AR 220, AR 201, AR 202, AR 230, AR 240, AR 250, AR 271, plus four Art electives

Cognate courses: None

Biology (Teacher of Biology 9-12)

Major courses: BI 100, BI 104*, BI 282 or BI 284, BI 240, BI 373, BI 321, BI 428, BI 341, BI 425 (*Students with an A or B grade in BI 100 are not required to take BI 104)

Cognate courses: CH 131, CH 132, PH 181, PH 182, plus two Mathematics courses one of which must be in calculus, statistics, or computer science

Chemistry (Teacher of Chemistry 9-12)

Major courses: CH 100, CH 141, CH 142, CH 241, CH 242, CH 343, CH 344, CH 381, CH 382, CH 450

Cognate courses: MA 101, MA 102, PH 243, PH 244, plus one year of a foreign language

Communication Arts and Sciences

Speech Communication Concentration (Teacher of Speech 9-12)

Major courses: CC 200, CC 210, CC 250 or CC 351, CT 250, CC 260, CD 292, CT 310, CC 360 or CC 363, CC 452 or CC 486, CC 450, CC 495, plus one elective from among the following (CC 400, CT 330, CT 392, CT 390)

Cognate courses: None

Theatre Arts Concentration (Teacher of Drama 5-12)

Major courses: CC 200, CC 210, CC 250, CT 250, CD 292, CT 380, CT 390, CT 431, CT 432, CT 395, plus one course from among the following (CT 290, CT 310, CT 330, CT 392, CC 400, CT 420) plus four credits from CT 130 and/or CT 131

Cognate courses: one course from among the following (EN 215, EN 241, EN 242, EN 353, EN 356)

Earth Sciences (Teacher of Earth Sciences 9-12)

Major courses: ES 100, ES 101, ES 284, ES 301, ES 306, GE 303, ES 372, ES 463, plus 12 additional semester hours of approved Earth Sciences electives

Cognate courses: MA 101-102 or MA 103-104, CH 131-132 or CH 141-142, plus one year of Physics or Biology; competence in a foreign language at the intermediate level

English (Teacher of English 9-12)

Major courses: EN 101, EN 102, EN 301, EN 323, one English Literature course before 1800, one English Literature course after 1800, one American Literature course, one Shakespeare course, one writing course above the Freshman level, plus 3 English electives.

Cognate courses: Proficiency in a foreign language at the intermediate level

French (Teacher of French 9-12)

Major courses: LF 181, LF 182, LF 201, LF 281, LF 252, LF 301, LF 352, LF 381, LF 382, LF 401, LF 452, plus one French elective

Cognate courses: None

In addition to the above, certification as a teacher of French requires that the student pass a proficiency examination in the language.

Geography (Teacher of Geography 9-12)

Major courses: GE 100, GS 110, GE 216, GE 304, GS 362, GE 471, GS 353 or GS 473, plus three Physical Geography/Earth Science electives, and one field course from among the following (GE 217, GE 354, GE 363, GE 418)

Cognate courses: MA 103, MA 104, MA 110; competence in a foreign language at the intermediate level

History (Teacher of History 9-12)

Major courses: Two sequential 100 level courses from Area I or Area III, one 300-400 level course from Area II, one 300-400 level course from Area IV, HI 221, HI 222, three 300-400 level courses from Area V, one course from Area VI, HI 492, one 300-400 level course from Area VIII or one course from among the following (ID 200, ID 210, ID 220, ID 420, SS 300)

Cognate courses: None

History (Teacher of Social Studies 9-12)

Major courses: Two sequential 100 level courses, HI 221, HI 222, one 300-400 level course in United States History, one 300-400 level course in non-United States History, HI 492, plus one History elective

Cognate courses: PO 272, PO 277 or PO 360, EC 200, EC 320, SO 202, two elective courses in Political Science or Geography as a Social Science, one regional Geography course in Geography as a Social Science, one course in Philosophy or Religion

Mathematics (Teacher of Mathematics 9-12)

Major courses: CS 101, MA 101, MA 102, MA 201, MA 202, MA 301, MA 401, MA 200, one course in algebra, advanced calculus or foundations, one course in probability, statistics or applied mathematics, one course in geometry, history of mathematics or seminar, and one elective in higher mathematics

Cognate courses: PH 243, PH 244, plus one year of a foreign language.

Physics (Teacher of Physics 9-12)

Major courses: PH 243, PH 244, PH 375 or PH 385, PH 387, PH 388, PH 389, PH 392, PH 403

Cognate courses: MA 101, MA 102, MA 201, MA 316, CH 141, CH 142

Psychology (Teacher of Behavioral Sciences 9-12)

Major courses: PY 100, PY 224 or PY 226, PY 251, PY 310, PY 319, PY 360, one Psychology elective, plus one course from among the following (PY 318, PY 324, PY 340, PY 353)

Cognate courses: BH 201, BI 102, BI 112 or BI 311, AN 201, AN 304, HI 221, HI 413, HI 476, SO 302, SO 303 or SO 312; a one-year sequence of a foreign language at the intermediate level of its equivalent

Sociology (Teacher of Behavioral Sciences 9-12)

Major courses: SO 202, SO 305, SO 400, SO 402, one course from among the following (SO 303, SO 304, SO 306, SO 312), one course from among the following (SO 302, SO 327, SO 328), plus two Sociology electives.

Cognate courses: BH 201, AN 201, AN 202, PY 100, PY 224 or PY 226, HI 221, HI 413, HI 427 or HI 476

Spanish (Teacher of Spanish 9-12)

Major courses: LS 181, LS 182, LS 201, LS 202, LS 251, LS 252, LS 281, LS 282, LS 292, plus three Spanish electives

Cognate courses: None

In addition to the above, certification as a teacher of Spanish requires that the student pass a proficiency examination in the language.

GRADUATE PROGRAM

The Department of High School, Middle School, and Adult Education, in conjunction with most of the academic departments of the College, offers a program leading to the degree of Master of Arts in Teaching with a concentration in a variety of areas. This program is described under the heading *Graduate Degree Requirements — Master of Arts in Teaching* in the Graduate School section of this Catalogue.

It should be noted that requirements for the certification of educational personnel in Massachusetts are being substantially modified. This in turn is necessitating corresponding changes in requirements for programs which include certification. Students graduating after August, 1982, should consult with the department chairperson concerning changes in program requirements.

All accepted students must enroll under the direction of their advisors in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. For advice relative to the Master of Arts in Teaching program, those not yet accepted should consult with the chairperson of the appropriate academic department and the chairperson of the Department of High School, Middle School, and Adult Education.

The departmental offerings listed on following pages include the following courses which may not be taken for graduate credit: all courses at the 200 level and ED 499.

COURSE OFFERINGS*

ED 220 Teaching in the High School

3 crs.

Introduction to teaching in contemporary high school classrooms. Developing competencies in effective, understandable and appropriate modes of communication in teaching is stressed through microteaching and other simulations. Emphasis is also placed on understanding the contemporary high school, e.g. various organizational structures, curricula, teacher roles, etc. Students gain attendant, meaningful experiences through observing, tutoring or assisting teachers in area high schools.

ED 230 Educational Psychology

3 crs.

Designed to assist prospective teachers better conceptualize education from a psychological point of view, the course examines two complementary thrusts in psychology as they relate to the teaching-learning enterprise: (1) Developmental Psychology and (2) the Psychology of Individual Differences. Emphasis is placed upon understanding the intellectual, emotional, social and moral stages that all learners go through. Stress upon the psychology of individual differences (e.g., different cognitive learning styles, personality differences) promotes more awareness as to how individual learners vary from each other.

ED 240 Classroom Management in the High School

3 crs.

Study of different approaches to classroom management in the high school. Developing competencies in various approaches to classroom management, including the maintenance of a sense of order, relating to students as individuals and as members of groups, and creating a positive atmosphere, is stressed. Students gain attendant, meaningful experiences through field work in area high schools.



*See page 83 for general information regarding course offerings.

ED 360 Aims and Philosophy of High School Education 3 crs.

The aims of high school education, its curriculum, structure and teaching strategies are examined using the concepts and methodologies of philosophy. Developing competencies in thinking clearly and rationally in identifying goals and objectives, designing curricula, and selecting materials, media and techniques is stressed. Emphasis is also placed on understanding the philosophical issues embedded in the rational determination of the above, especially as these relate to education in a multi-cultural society. (This course may not be taken for credit by students who have satisfactorily completed ED 480 or ED 361.)

ED 370 Evaluating Teaching and Learning in the High School 3 crs.

Prq.: ED 230

Developing competencies in the design and use of various evaluative instruments appropriate to the high school. Particular emphasis is placed on using the results of evaluation to improve instruction, problems of interpretation, and correcting for bias.

ED 380 Contemporary Issues in Education 3 crs.

The identification and analysis of fundamental issues currently facing the American educator. The goal is to understand the source of the problems and to evaluate suggestion solutions.

ED 381 Soviet Education 3 crs.

This course will first introduce the land, climate and peoples of the USSR. Their education will then be studied within the framework of Russia's thousand-year-old civilization, as well as within the contemporary collective setting. Teaching and learning on all levels will be treated, in both the European and Asian parts of the country with its over 60 native tongues. American and Soviet sources will be used.

ED 382 Comparative Education 3 crs.

Representative educational patterns from Asia, Africa, Europe, North and South America and their relationship to social institutions and problems.

ED 383 International Education 3 crs.

An introduction to the role of education in the interaction of the peoples and cultures of various nations. Activities of such entities as OAS, UNESCO, OECD, etc. engaged in fostering international exchange of education concepts, leaders and programs will be reviewed. Major contemporary trends and international issues in education will be identified and analyzed.

ED 384 Canadian Education Seminar 3 crs.

The seminar provides the opportunity for students to explore the political, economic, ethnic, social, and cultural complexities of education in Canada. Particular emphasis is placed on the problem of the reconciliation of National and Provincial goals. One field-trip per semester is an integral part of the inquiry. Each student will be expected to bear the cost of his/her own expenses for the field-trip.

ED 412-426 Strategies for Teaching in the High School 3 crs.

Prq.: ED 230, ED 360, ED 370

Strategies, including methods, materials and media, for teaching particular disciplines are studied. Developing competency and versatility is stressed through simulations and guided teaching in area high schools. A student registers for the course appropriate to his/her major according to the following schedule:

ED 412 Social Studies	ED 421 Biology
ED 414 English	ED 422 Mathematics
ED 416 Earth Sciences	ED 424 Foreign Language
ED 417 Geography	ED 425 Art
ED 419 Physical Science	ED 426 Speech and Theatre

ED 440 Methods and Materials in Secondary Education 3 crs.

Prq.: ED 230

Emphasis is on the analysis of teaching in the modern secondary school. Topics will include: the learning process; establishing objectives; classroom organization and management; meeting individual differences; evaluation; correlation between subject matter fields; and recent developments in methodology and subject matter. Primarily for those interested in gaining certification, undergraduates with no teaching experience, and teachers who have been away from the classroom for many years. Offered only through the Program of Continuing Education.

ED 441 Strategies of Values Clarification in the Classroom 3 crs.

The development of competencies in the planning and implementation of various Values Clarification Strategies for use in elementary, middle and high schools. Also a consideration of the rationale for use of Values Clarification Strategies.

ED 443 Secondary School Curriculum 3 crs.

Purposes of the modern secondary school and the curriculum needed to implement them; historical origins, modern development, and future possibilities. Stress is on the manner in which the curriculum is built, behavioral objectives, resource centers, assisting in curriculum construction, and methods of curriculum evaluation. Offered only through the Program of Continuing Education.

ED 480 Philosophy of Education 3 crs.

Thinking critically and imaginatively about education from the viewpoint of philosophy. Emphasis is placed on understanding the philosophical presuppositions underlying educational practices and policies.

ED 485 History of Educational Thought 3 crs.

Research and evaluation of the theories from which present educational practices, policies, and theories have developed. Offered only through the Program of Continuing Education.

ED 487 History of American Education 3 crs.

An examination of the development of education in America from colonial times to the present with a consideration of probable future directions. Offered only through the Program of Continuing Education.

ED 490 Student Teaching Practicum — High School 15 crs.

Prq.: Acceptance and Good Standing in Teacher Preparation Program, ED 412-426

Graduate students must first complete 24 graduate credits of approved degree work or obtain permission from the Director of the Division of Professional Education.

Students are assigned appropriate student teaching stations where they work in an approved situation under an experienced supervising teacher. This is a practical experience for one semester in a public school where student teachers are functioning as professional teachers. A college supervisor visits to assist the student teacher. Seminars may be held to exchange experiences. Students are expected to carry a minimum responsible teaching load equal to 50% of the regular teacher's assignment. Full time for one semester.

ED 499 Directed Study in Secondary Education 1-3 crs.

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

ED 505 Historical Foundations of Education 3 crs.

Prq.: ED 480

Historical persons, events and movements which have built man's educational establishment from antiquity to current developments in the American school scene.

ED 520 Psychological Foundations of Education 3 crs.

Prq.: PY 100 and one of the following: PY 224, PY 226, PY 252, ED 230

A systematic exploration of the various psychological principles related to teaching and application of these principles in specific classroom situations. Special emphasis on social psychology, dynamics in interpersonal relationships and group processes, motivation, and discipline theory.

ED 523 Directed Study in Educational Psychology credit to be arranged

Prq.: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's advisor

Designed for individuals who desire to study selected topics in this field. Variable credit, and repetitive up to a total of 4 credits for an M.A.T. Students who wish to enroll in the directed study should obtain the form *Request for Directed Study* at the Graduate School Office well in advance of registration. The completed form should be filed with the Program of Continuing Education at the time of registration.

ED 524 Seminar in Foreign Languages Methods and Materials 3 crs.

Prq.: A course in foreign language methods and materials

Intended primarily for teachers with some experience, the course will concentrate on new developments in materials and methods, with emphasis on career opportunities, the teachers of culture, individualized instruction and the supervision of student teachers.

ED 545 Curriculum Development for the Academically Talented Student in the Secondary School 3 crs.

Survey of current curricula status and problems that face the Academically Talented student. A study of techniques for modifying curricula to meet school, community, and individual needs. An examination of means of evaluation of curriculum's effectiveness. Search for local and regional resources to satisfy the academic needs of the talented.

Ed 580 Philosophical Foundations of Education 3 crs.

Prq.: ED 480

A critical and intensive analysis of selected concepts and beliefs which function as the basis of recent philosophies of education and their relation to current educational practices and policies. Readings from recent philosophers of education.

ED 583 Directed Study in the Philosophy of Education credit to be arranged

Prq.: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's advisor

Designed for individuals who desire to study selected topics in this field. Variable credit, and repetitive up to a total of 4 credits for an M.A.T. Grades will be given. Students who wish to enroll in Directed Study should obtain the form *Request for Directed Study* at the Graduate School Office well in advance of registration. The completed form should be filed with the Program of Continuing Education at the time of registration.

ED 590 Sociological Foundations of Education 3 crs.

Prq.: SO 202 or permission of the Instructor

A critical examination of the effects of various social institutions, group, and situations on educational policy and content.

ED 591 Research in the Classroom Teaching of Language Arts 3 crs.

Designed to introduce the student to the fundamentals of educational research methodology and to develop an understanding of current research findings in the area of Language Arts.

Achievement of these goals to be demonstrated by the completion of a research project in the student's area of interest.

ED 592 Research in the Classroom Teaching of Social Science 3 crs.

Designed to introduce the student to the fundamentals of educational research methodology and to develop an understanding of current research findings in the area of Social Sciences. Achievement of these goals to be demonstrated by the completion of a research project in the student's area of interest.

ED 593 Research in the Classroom Teaching of Mathematics 3 crs.

Designed to introduce the student to the fundamentals of educational research methodology and to develop an understanding of current research findings in the area of Mathematics. Achievement of these goals to be demonstrated by the completion of a research project in the student's area of interest.

ED 594 Research in the Classroom Teaching of Science 3 crs.

Designed to introduce the student to the fundamentals of educational research methodology and to develop an understanding of current research findings in the area of Science. Achievement of these goals to be demonstrated by the completion of a research project in the student's area of interest.

ED 595 Research in the Teaching of Reading 3 crs.

Prq.: EE 420 and EE 540

This course is designed to provide students with a thorough introduction to research methodology: formulation of problems and hypotheses, research design, data-gathering instruments, analysis, and the writing of research reports. Students will apply these skills in the evaluation of research in the field of reading and in the completion of a research paper related to the teaching of reading.



Department of Media and Librarianship

Professor Alan Lander, Chairperson
and Graduate Program Coordinator
Associate Professor Adeline Oakley
Assistant Professors: Francis Murphy,
Richard Neubauer, Robert Ward

As detailed below, the Department of Media and Librarianship offers undergraduate minors in the areas of Instructional Media, Radio and Television Operation and Production, and Library Science. At the graduate level, the Department offers programs leading to a Master of Education in Instructional Media, Master of Education in School Librarianship, and Certificate of Advanced Graduate Study (CAGS) in Education with areas of study in media and/or library science. For CAGS details, consult the CAGS in Education section of this Catalogue.

In addition, the Department offers, in conjunction with all of its graduate offerings, a program designed to prepare Unified Media Specialists in accordance with Massachusetts certification standards.

It should be noted that the requirements for teacher certification of educational personnel in Massachusetts have been substantially modified. This in turn necessitates corresponding changes in requirements for programs which include certification. Students graduating after August, 1982, should consult with the department chairperson concerning changes in program requirements.

INSTRUCTIONAL MEDIA

Instructional Media programs offer students the opportunity to become adept at and proficient in the use of the latest media theory, techniques, and technology in education.

UNDERGRADUATE PROGRAM

Instructional Media Minor

ME 310 or ME 311, ME 452, ME 456, ME 460

Six (6) additional credits in Instructional Media (with program approval)

Radio and Television Operation and Production Minor

For detailed information on this minor, see the catalogue section entitled *Undergraduate Multidisciplinary and Pre-Professional Programs*.

GRADUATE PROGRAM

Master of Education in Instructional Media

This program is designed for present and future media specialists.

The following are program course prerequisites which may be fulfilled after admission: ED 443 or EE 450, and EE 420. Credits earned in these courses may not be counted toward the minimum of thirty-three graduate credits required for the degree. Students who have matriculated or who plan to matriculate in the graduate program should receive program approval prior to enrolling in courses which will be used to fulfill degree requirements.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. As part of their program, students must satisfactorily complete the following curriculum:

1. Research Methods and Findings: ME 524 Seminar in Instructional Media — 3 graduate credits.
2. Humanistic and Behavioral Studies: Consult *Graduate Degree Requirement — Master of Education* in the Graduate School section of this catalogue — 6 graduate credits.
3. Program Requirements: ME 310, ME 412, ME 452, ME 456, ME 460, and ME 464 — 18 graduate credits.
4. Program Electives: Courses appropriate to the program and approved by the advisor — 6 or more graduate credits.

Information regarding Unified Media Specialist certification is provided on following pages. For additional information relative to this program, students not yet accepted should consult with the program coordinator.

The program offerings listed below include the following courses which may not be taken for graduate credit: ME 498, ME 499.

LIBRARY SCIENCE

Library Science programs provide students with practical and theoretical courses, workshops, and field experiences that will enable them to acquire the philosophy and professional competencies necessary to be a successful school or public librarian.

UNDERGRADUATE PROGRAM

This program offers library instruction to all undergraduate students and to those who wish to minor in library science. The undergraduate minor in library science is designed for Education majors and High School minors as well as other students who wish employment in public and special libraries.

Suggested electives for students in other programs: ML 300 for classroom teachers, school administrators; ML 310 for elementary classroom teachers, Special Education and Reading; ML 320 for High School teachers; ML 370 for students wishing to upgrade their research skills.

Acceptance of transfer credits in library science courses must be approved by the Department.

Library Science Minor

ML 310 or ML 320, ML 370, ML 430, ML 440, ML 498

At least two additional courses in Library Science (with department approval).

GRADUATE PROGRAM

Master of Education in School Librarianship

This program is designed primarily for school librarians; many of the courses, however, are of value to educators outside of the library profession.

A minimum of thirty approved graduate credits is required for this degree program. It should be noted that additional credits may be required by the program advisor, as determined by the student's library science background. The program's Comprehensive Examination includes both written and oral sections.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. As part of their program, students must satisfactorily complete the following curriculum:

1. Research Methods and Findings: GC 500 Research and Evaluation — 3 graduate credits.
2. Humanistic and Behavioral Studies: Consult *Graduate Program Requirements — Master of Education* in the Graduate School section of this catalogue — 6 graduate credits.
3. Program Requirements: ML 310 or 320, ML 370, ML 430, ML 440, and ML 595 — 18 graduate credits.
4. Program Electives: Courses appropriate to the degree program and approved by the advisor. At least two electives must be selected from Library Science courses offered for graduate credit only (500 level) — 6 or more graduate credits.

Admission requirements, in addition to the application information provided in the Graduate School section of this catalogue, include:

1. Successful completion of a personal interview with the Admissions Committee of the Department (applicants will be contacted by the Department).
2. Submission of a certificate of speech proficiency (contact the Department).

Information regarding Unified Media Specialist certification is provided below.

Course offerings which may not be taken for graduate credit are: ML 102, ML 498, and ML 499.

UNIFIED MEDIA SPECIALIST PROGRAM

This track may be taken in conjunction with the Master of Education in Instructional Media, Master of Education in Library Science, or CAGS in Education programs. It is designed to prepare students to meet the Massachusetts Department of Education's requirements for certification as

a Unified Media Specialist, which become effective in September, 1982. It should be noted that a student who has completed all of the following requirements may apply for certification prior to completion of his or her graduate degree or CAGS program.

Prerequisites for admission to the program:

1. Possession of a Massachusetts classroom teaching certificate. (This requirement can be fulfilled during the program but must be completed prior to the beginning of the practicum).
2. Successful completion, with a grade of B or better, of ML 300 Introduction to Unified Media Services and ME 310 Introduction to Instructional Media.

Unified Media Specialist Program:

1. Completion of 30 hours of course work as follows:
 - ME 310 Introduction to Instructional Media
 - ME 452 Basic Photography
 - ME 456 Radio and TV Production I
 - or
 - ME 556 Operation and Control of a Radio Station and a Television Studio
 - ME 460/ME 560 Graphics for Designing Media
 - ME 464 Management of an Instructional Media Department
 - or
 - ME 564 Administration of Media Programs
 - or
 - ML 430 Management of Media Programs
 - ML 300 Introduction to Unified Media Services
 - **ML 310 Children's Literature (required for N-9 certification)**
 - or
 - ML 320 Literature for Young Adults (required for 5-12 certification)**
 - ML 370 Reference Materials and Their Use
 - ML 440 Organization of Materials
 - One appropriate 3-credit elective from the following ME or ML offerings (chosen with approval of the student's advisor):
- Electives for N-9 certification:
- ME 412 Communication Theory
 - ML 452 Collection Development
 - ML 453 Sharing Literature with Children

Electives for 5-12 certification:

ME 412 Communication Theory

ME 466 Cinematography I

ME 452 Collection Development

Note: All course projects and requirements must be related to the level of preparation (i.e. N-9 or 5-12 certification).

2. Completion of three different field experiences in the above course sequence prior to the beginning of the practicum. These experiences are offered in the following courses:

ME 310 Introduction to Instructional Media

ME 464 Management of an Instructional Media Department

ME 564 Administration of Media Programs

ML 300 Introduction to Unified Media Services

ML 430 Management of Media Programs

3. Completion of half-semester practicum or internship judged successful on the basis of the program's standards — ME/ML 595



COURSE OFFERINGS*

MEDIA

ME 310 Introduction to Instructional Media 3 crs.

Introduction to instructional media and technology incorporating selection, evaluation and utilization of instructional materials. Instruction in application of still pictures, slides, filmstrips, recordings, radio, television, three-dimensional materials, field trips, flannel boards, chalk boards, specialized teaching machines and audiovisual media design and preparation. Sources of teaching aids and supplementary materials in media are discussed.

ME 311 Introduction to Instructional Media for Special Education 3 crs.

Same as ME 310 with guided research applicable to all areas of Special Education.

ME 412 Communication Theory 3 crs.

Applies basic concepts of communication to problems related to training and instruction. Modern techniques and applications will be thoroughly discussed and practiced.

ME 420 Advanced Techniques in Instructional Media 3 crs.

Prq.: ME 310, 452, 456, 460 or consent of the Instructor

Directed study course. Development of a multi-media package of materials to be used in a training or instructional setting. Materials are produced by the student under the guidance of the instructor.

ME 452 Basic Photography 3 crs.

This course is designed to enable the student to learn and put into practice the basic fundamentals of photography. Techniques such as proper camera handling, exposure, elements of composition, black and white film development and printing, proper darkroom use and photo mounting are included. Students must have access to an adjustable camera.

ME 453 Intermediate Photography 3 crs.

Prq.: ME 452 or consent of the Instructor

This course is for those students who have a basic working knowledge of B&W photography, basic darkroom skills and can make good negatives and prints. The course will help the student to increase his visual awareness through regular shooting assignments and critiques and will also enable the photographer to develop a better understanding of exposure control, equipment and B&W processes in order to achieve a better final print. The course content includes an introduction to the Zone System, the relationship between exposure, film development and the printing process, toning, controlling contrast, print finishing, visual composition, and self-critiquing. The student will need an adjustable camera and must furnish his own film and paper.

ME 454 Script Writing for Radio, Television, and/or other Media 3 crs.

This course explores the many techniques necessary for the design of scripts for use in radio and television. The student will write scripts for actual studio production.

ME 456 Radio and TV Production I 3 crs.

The student will learn all of the technical operations necessary to direct radio and TV programs. Students will work on actual productions.

ME 457 Photography Techniques 3 crs.

Prq.: ME 452 or consent of the Instructor

The student will acquire and practice advanced photography skills. Techniques such as proper print finishing, print toning, preparation of black and white and color slides, use of the copy stand and the fundamentals of color printing are included. This course is recommended for only those students who have taken a basic photography course or its equivalent.

*See page 83 for general information regarding course offerings.

ME 458 Radio and TV Production II

3 crs.

Prq.: ME 456 or consent of the Instructor

Designed to make the student proficient in the production of radio and TV programming, with stress upon being able to make, obtain, and set up necessary props, background, camera shots, and sound effects.

ME 460 Graphics for Instructional Media

3 crs.

Prq.: Consent of the Instructor

An introductory course in basic graphic skills necessary for producing instructional materials and/or graphics for television. Course includes instruction in the use of simple mechanical lettering devices; mounting and laminating techniques; diazo and color-lift transparency production; composition and related skills.

ME 464 Management of Instructional Media Department

3 crs.

Prq.: Consent of the Instructor

The following functions are discussed: personnel, budgeting, purchasing, analysis of materials and equipment, in-service training, curriculum support, and classification of instructional materials.

ME 466 Cinematography I

3 crs.

Basic film production techniques and their application are taught. Topics such as scripting, the motion picture camera, lighting, shooting, splicing and editing are included. Students will work with super 8mm and/or 16mm equipment and materials.

ME 498 Internship in Media

3-15 crs.

Prq.: Consent of the Department

Offered to advanced undergraduate students who wish to acquire a supervised practical experience within their field of study. (See information in this catalogue under *Academic Programs* for a more complete description).

ME 499 Directed Study in Non-Print Instructional Media

1-3 crs.

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

ME 502 Research

credit to be arranged

Original research undertaken by the graduate student in his field (i.e. Nonprint Instructional Media). For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

ME 503 Directed Study

credit to be arranged

Designed for the graduate student who desires to study selected topics in his field (i.e. nonprint instructional media). For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

ME 524 Seminar in Instructional Media

3 crs.

Prq.: EE 420 or consent of the Instructor

This course is designed to carry out a systematic review and critique of media research literature and to bring about the ability to design and execute a research study pertinent to the field. Selected research and literature will be reviewed and analyzed.

ME 553 School Public Relations

3 crs.

The necessity for a well-informed public to foster good school public relations. All necessary media will be discussed: radio, television, newspapers, magazines, school publications, teacher-parent and administrator-teacher-parent relationships. Emphasis will be placed on communication theory.

ME 556 Operation and Control of a Radio Station and a Television Studio **3 crs.**

This course is intended for graduate students who are planning to be media specialists. It is designed to give the student an operational knowledge of the skills necessary to operate a radio station and a television studio. Production skills are also included.

ME 558 Radio and Television Production **3 crs.**

Prq.: ME 566 or consent of the Instructor

This course is intended for graduate students who are planning to be media specialists. It provides for the student with basic background in radio station and television studio operation opportunities to practice production and programming.

ME 560 Graphics for Designing Media **3 crs.**

Prq.: Consent of the Instructor

This course is designed for graduate students. It is an introductory course in basic graphic skills necessary for producing instructional materials and/or graphics for television. It is particularly intended for the person who is planning to be a media specialist. Course includes instruction in the use of simple mechanical lettering devices; mounting and laminating techniques; diazo and color-lift transparency production; composition and related skills.

ME 564 Administration of Media Programs **3 crs.**

Prq.: Consent of the Instructor

This course is designed for graduate students. It covers the principles and practices of the administration of media programs, particularly from the unified media approach. Areas of study include planning, equipping, servicing, and operation.

ME 566 Cinematography II **3 crs.**

Prq.: ME 466 or consent of the Instructor

Advanced techniques of film production in all of its technical phases, including production, design, editing, and sound synchronization.

ME 595 Professional Practicum/Internship **6 crs.**

Prq.: Completion of, or enrollment in, all other courses of the program. Involves observation and participation in all important aspects of administration, including selection and organization of materials; reference and bibliographic services, and techniques of teaching media use. This course must be pursued at a media center approved by the Media and Librarianship Department at Bridgewater and may only be waived, in the case of non-certification students, if the student has had considerable experience as a media specialist in a situation acceptable to the Department.

LIBRARIANSHIP

ML 102 Library Introduction **1 cr.**

New students are familiarized during one quarter of their first academic year. One period a week is devoted to developing basic library skills. 1 one-hour period during one quarter.

ML 300 Introduction to Unified Media Services **3 crs.**

The philosophy, functions, and evaluation of the media center in the school for future teachers, administrators, librarians, and media specialists. Correlation of the media center with the modern curriculum, the use of print and non-print materials in the media center, and the mutual cooperation of administration, faculty, and students. 40 hours of observation in a variety of school media centers is required as part of the course.

ML 310 Children's Literature **3 crs.**

Reading, listening and viewing interests and abilities, from pre-school through the elementary grades, as important considerations in evaluation and selection of materials; analysis of literary and artistic elements, and cultural influences of both past and present. Types include myth and

folklore, poetry, modern fanciful tales, realistic fiction, and books in special fields, e.g., biography, history, and science.

ML 320 Literature for Young Adults **3 crs.**

Survey of literature and audio visual materials for adolescents. Includes applicable principles of adolescent psychology, a brief history of the development of this literature, criteria and aids for selection, techniques in motivation and reading guidance, and skills in reading, listening and viewing. Designed for teachers, librarians, and media specialists working with junior and senior high school students.

ML 370 Reference Materials and Their Use **3 crs.**

Introduction to the basic reference books in all subject disciplines. Bibliographic search assignments give practical application of techniques using all the resources of the media center.

ML 430 Management of Media Programs **3 crs.**

Principles and practices in administration and service; the role of the media center in the school's educational program, pupil instruction in media center use; the planning and equipping of the media center; and other aspects of organization.

ML 440 Organization of Materials **3 crs.**

Presentation of practical techniques for print and non-print cataloging with emphasis on Dewey Decimal classification and Sears Subject Headings. Some time is given to the general processing of materials and to evaluation of commercial cataloging services.

ML 452 Collection Development **3 crs.**

Criteria and policies in selection of print and non-print material for reader interest and curriculum enrichment, with emphasis on practical applications and appraisal of bibliographic aids and current review practices. Offered only through the Program of Continuing Education.

ML 453 Sharing Literature with Children **3 crs.**

Traditional and contemporary storytelling, reading aloud, response-centered activities, book talks, book-related film programs based on the concept of sharing as an integral part of a literature program; emphasis on selection, planning, techniques of presentation, e.g., puppets, flannelboard, hook-and-loop, and evaluation.

ML 455 Film Librarianship **3 crs.**

A comprehensive study of the 16 millimeter film, stressing its use in school and public libraries: brief history and development of theatrical, documentary, and experimental cinema; evaluation and criticism; resources and programming, selection, and distribution. Offered only through the Program of Continuing Education.

ML 498 Internship in Librarianship **3-15 crs.**

Prq.: Consent of the Department

Offered to advanced undergraduate students who wish to acquire a supervised practical experience within their field of study. (See information in this catalogue under *Academic Programs* for a more complete description).

ML 499 Directed Study in Library Science **1-3 crs.**

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

ML 502 Research **credit to be arranged**

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

ML 503 Directed Study

credit to be arranged

Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

ML 548 Advanced Cataloging and Classification

3 crs.

Theoretical discussion and practical application of techniques in detailed cataloging with emphasis on Library of Congress classification and subject headings. Includes non-book cataloging.

ML 553 Foundations of Library and Information Science

3 crs.

Form and function of classical, medieval, and scholarly libraries; the public library as the people's university; development of information centers, libraries, and media centers, and their role in contemporary society.

ML 555 Literature of Science and Technology

3 crs.

Prq.: ML 370

A continuation of ML 370. Background, trends, and bibliographic control of reference books in natural and physical sciences, both pure and applied, including serials and government documents.

ML 556 Literature of the Humanities

3 crs.

Prq.: ML 370

A continuation of ML 370. Background, trends and bibliographic control of reference books in literature, the arts, philosophy, and religion, including serials and government documents.

ML 557 Literature of the Social Sciences

3 crs.

Prq.: ML 370

A continuation of ML 370. Background, trends, and bibliographic control of reference books in history, political science, education and the behavioral sciences, including serials and government documents.

ML 558 Advanced Studies in Literature for Children and Young People

3 crs.

Prq.: ML 310 or 320 or consent of the Instructor

A seminar format which offers the student an opportunity to explore recent artistic, literary, and social developments in books and media for the young, or for study of particular genres or themes.

ML 559 Advanced Reference I

3 crs.

Prq.: ML 370

Research methods using specialized reference sources, professional journals, and audio-visual materials, intended for *retrospective* studies in history, literature, music, philosophy, religion, and the arts.

ML 560 Advanced Reference II

3 crs.

Prq.: ML 370

Research methods using specialized reference sources, professional journals, government documents, microforms, and audio-visual materials, intended for the study of the social and behavioral sciences and services, and pure and applied science and technology, focusing on contemporary materials and topics.

ML 566 Systems Approach to Libraries

3 crs.

Prq.: ML 555 or permission of the Instructor

Survey of developments in information retrieval and other library applications of modern procedures in acquisition, circulation, management, and periodical control.

ML 569 The Book Arts

3 crs.

Traces the development of the written word from the earliest alphabet to today's computerized publishing. The history, art, and science of the book include field study of book production; manuscripts, rare books and bindings; and award winning books.

ML 576 Research Problems in Library Literature

3 crs.

Prq.: Consent of the Department

Designed for special projects for advanced students desiring individual instruction in the methods of library research.

ML 590 Seminar on Librarianship

3 crs.

Prq.: A minimum of 12 credit hours in Library Science and consent of the Advisor

Intended as a culminating exercise in administrative librarianship. It will include study and analysis of current problems and issues in library administration. Students will seek solutions to these through reading and research.

ML 595 Professional Practicum/Internship

6 crs.

Prq.: Completion of, or enrollment in, all other courses in the program

Involves observation and participation in all important aspects of administration, including selection and organization of materials; reference and bibliographic services, and techniques of teaching library use. This course must be pursued at a media center approved by the Media and Librarianship Department at Bridgewater and may only be waived, in the case of non-certification students, if the student has had considerable experience as a media specialist in a situation acceptable to the Department.



Division of Professional Education Graduate Programs: M.Ed. in Counseling M.Ed. in School Administration CAGS in Education

COUNSELING

The Counseling Program Committee

Assistant Professors: M. Jones (Committee Coordinator),
McGuirk, Worden
Staff: Gaines, Plotner, Veno

Programs leading to the Master of Education in Counseling and the CAGS in Education with an emphasis on Counseling are designed to prepare graduates for employment in a variety of mental health settings, entry level positions in college student personnel work, and as counselors in elementary and secondary schools. For CAGS details, consult the CAGS in Education section of the Catalogue.

Students seeking certification as school guidance counselors or guidance directors are reminded it is their responsibility to develop a program which parallels state certification requirements. Students graduating after August, 1982, should consult with the program coordinator concerning changes in Massachusetts certification regulations.

Master of Education in Counseling

The Committee subscribes to the general policies of admission as outlined by the Graduate School. Candidates should be able to demonstrate through paid or non-paid experience an aptitude for counseling. In addition, in the case of certain applicants, a personal interview may be required. Full-time students who commence their study during the spring or summer semesters should be able to complete requirements within one full academic year. While a teaching certificate is not required, candidates seeking school counselor positions are urged to obtain appropriate teacher certification credentials.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of the catalog. A minimum of thirty-six approved graduate credits is required in this degree program. Students must satisfactorily complete, with the approval of their advisor, the following curriculum:

1. Research Methods and Findings: GC 500 Research and Evaluation
- The research topic selected must relate to the degree program, or additional research-based study through GC 502 or GC 503 will be required — 3 graduate credits.
2. Humanistic and Behavioral Studies: GC 430 The Guidance Function in School, Agency and Community Settings, ED 520 Psychological Foundations of Education — 6 credits.
3. Departmental requirements: SA 560 (may be waived for persons with appropriate teaching experience or non-educational career goals), GC 530, GC 533, either GC 535 or GC 536, and an appropriate Practicum or Internship — 15-18 credits.
4. Program Electives: Courses appropriate to the degree program and the personal/career goals of the individual student. Degree candidates are urged with the approval of their advisor to consider the wide range of complementary courses offered by other departments. — minimum of 6 credits.

Prospective candidates who have not been formally accepted into the program are urged to confine their selection of courses to curriculum areas other than program electives. Specific assistance may be obtained from the Committee Coordinator.

Comprehensive examinations are administered in November and April. The examination, which requires a solid understanding of and a high level of competency in the areas emphasized by the Counseling Program, may not ordinarily be taken prior to the last term of course work. Previous examinations are on reserve at the Main Desk at the Maxwell Library.

COURSE OFFERINGS*

GC 430 The Guidance Function in School, Agency and Community Settings **3 crs.**

Designed to acquaint the pre-professional counselor with the various aspects of the total guidance program which result in a continuous and meaningful sequence of services to clients, students, professional staff, and the community. Philosophical and psychological issues will be addressed as well as current practices. Pre-practica field component included.

GC 450 Career Counseling Strategies **3 crs.**

Designed to give the counseling professional an intensive, hands-on experience in the techniques and strategies of career counseling. Provides exposure to the major current theories of career life planning and to a range of techniques to be used with clients. Applicable to school and agency counselors and to persons currently undergoing career change.

GC 500 Research and Evaluation **3 crs.**

Prq.: EE 420, a statistics course, or permission of the Instructor

The completion of a research paper is the main objective of this course which is designed to serve the beginning graduate student. To that end, the course will stress the nature of, and criteria for, conducting and evaluating research. The necessary library techniques and resources for selecting and delimiting problems, appraisal of related research literature and documentation, organization and format of a research study will be explored in depth. Concepts in descriptive statistics will also be reviewed.

GC 502 Research **3-6 crs.**

Original research undertaken by the graduate student. For details, consult the Graduate School section of this catalogue for information on Independent Study.

GC 503 Directed Study **3-6 crs.**

Prq.: Completion of 15 approved graduate credits and acceptance in the Counseling Program
Designed for the graduate student who desires to study selected topics in the counseling field or engage in field work. For details, consult the Graduate School section of this catalogue for information on Independent Study.

GC 522 Measurement of Intelligence: Stanford-Binet **3 crs.**

Prq.: PY 100 and one of the following: EE 420, a statistics course, or GC 533
Training in the administration, scoring and interpretation of the Stanford-Binet Intelligence Scale. A test kit is necessary.

GC 524 Measurement of Intelligence: WAIS, WISC-R, and WPPSI **3 crs.**

Prq.: PY 100 and one of the following: EE 420, a statistics course, or GC 533
Training in the administration, scoring and interpretation of the forms of the Wechsler Intelligence Scale. A test kit is necessary.

GC 526 Projective Assessment Techniques I **3 crs.**

A basic training course in the administration, scoring and interpretation of selected projective instruments including the Bender Gestalt, TAT, CAT, HTP and MMPI. Projective aspects of the Wechsler and Stanford-Binet Scales will be emphasized.

*See page 83 for general information regarding course offerings.

GC 527 Projective Assessment Techniques II 3 crs.

Prq.: GC 526 or permission of the Instructor

An in depth experience utilizing a case study approach in the implementation of Battery Testing. Advanced techniques utilizing the Bender Gestalt and TAT as well as an introduction to the Rorschach will be included.

GC 530 Counseling Theory and Practice 3 crs.

Prq.: GC 430

An analysis of the major theories of counseling and the application of techniques utilized in the counseling process will be emphasized. Discussion of situational problems and role playing will allow for the practice of each model as applied in counseling settings.

GC 531 Organization and Administration of Guidance Programs 3 crs.

Prq.: GC 430

Administrative skills required in needs assessment, program design and evaluation of effectiveness will be emphasized. Current laws and regulations will be reviewed and sources of funding explained. Students will develop research and communication approaches to respond appropriately to social, economic and political demands within a school or agency setting.

GC 533 Psychological Measurement 3 crs.

Prq.: EE 420 or a course in statistics and GC 430

Introduction to the basic principles of group psychological testing and the most commonly used instruments for assessing intelligence, achievement, aptitude, interest, and personality. Emphasis will be placed on test score interpretation within a counseling context. Pre-practica field component included.

GC 535 Applied Counseling: Adolescent-Adult 3 crs.

Prq.: GC 530, GC 538

Developmental issues, diagnostic techniques and individual and group counseling strategies appropriate for use with adolescents and/or adults will be addressed. Report writing, referral and consultation procedures and current trends will be studied. Pre-practica (5-12) field component included.

GC 536 Applied Counseling: Pre-Adolescent 3 crs.

Prq.: GC 530, GC 538

Developmental issues, diagnostic techniques and individual and group counseling strategies appropriate for use with pre-adolescents will be addressed. Report writing, referral and consultation procedures and current trends will be studied. Pre-practica (N-9) field component included.

GC 537 Seminar in Counseling 3 crs.

Prq.: GC 530 or permission of the Instructor

Workshop format course will focus on the initial, middle and final phases of the counseling process. Primary readings will be utilized. Techniques and strategies to promote counseling effectiveness will be practiced.

GC 538 Theory and Process of Group Interaction 3 crs.

Prq.: GC 530

An examination of the theories and processes of group dynamics and their relationship to counseling philosophy. Special emphasis will be placed on the synthesis of leadership, membership, and purpose, as well as the evaluation of the appropriateness of various group counseling applications.

GC 539 Career Information and Placements 3 crs.

Prq.: GC 430

Emphasis is placed on the role of the counselor in the career decision-making process. Topics include a survey of selected theories of vocational choice and development and review of the theoretical concepts, issues and trends in career education. The use of career and educational information is considered. Pre-practica field experience included.

- GC 540 Advanced Counseling Theory and Practice** 3 crs.
Prq.: GC 530
An intensive application of counseling practice in a personalized rather than theoretical manner. Theory will be reviewed from the perspective of the student's personal counseling style. An atmosphere of constructive criticism will be developed, providing evaluative feedback to each participant. Maximum use of audio and video tapes will be made.
- GC 541 The Counselor's Role in the Implementation of Federal/State Legislation** 3 crs.
Prq.: GC 430
Provides the participant with information on Chapter 766, 94-142 and 504 special education laws. The counselor's role as TEAM Evaluation participant will be thoroughly covered by addressing the following issues: writing performance objectives, developing educational plans, roles and strategies of the counselor, financial implications, the law and evaluation procedures, and utilization of special education personnel. Other pertinent legislation will be reviewed.
- GC 542 The Facilitation of Group Experience** 3 crs.
Prq.: GC 538 or permission of the Instructor
An introduction to the concepts and practices of facilitating various types of group experiences. A number of leadership methods will be presented, and each participant will experience a leadership role under controlled circumstances.
- GC 543 Theories of Career Development** 3 crs.
Prq.: GC 539 or permission of the Instructor
The career development process, the history of its study, its characteristics at each life stage, and the current issues in its facilitation for women, men, couples, and minority persons will constitute the content of this course. Practical applications will include an examination of activities and materials designed to bring about greater awareness of needs, values, interests and abilities related to career decision-making.
- GC 544 Introduction to Reality Therapy** 3 crs.
Prq.: GC 530
Course is designed to bring about an awareness and an understanding of the philosophy and basic concepts of Reality Therapy. Activities will enhance opportunity to experience Reality Therapy as a technique for counseling.
- GC 545 Counseling from an Existential-Humanistic Perspective** 3 crs.
Prq.: GC 530
An examination of the philosophy of Existentialism with particular emphasis on its relevance to counseling. Topics include the existential crisis, authenticity, resistance, the role of the counselor, the self, anxiety and choice.
- GC 546 Parent and Family Counseling** 3 crs.
Prq.: GC 530
An introduction to the theory and practice of parent counseling groups and to several models of family counseling.
- GC 550 Psychometrics in 766 for the Counselor** 3 crs.
Prq.: GC 522 or GC 524
Training in the administration, scoring and interpretation of the psychometric instruments used by counselors in work with special needs populations. Will include a demonstration of such instruments as the Leiter, Sequin, Bender-Gestalt, WRAT, PIAT, Merrill Palmer, Dvorine, CMMS, and VMI.
- GC 551 Student Personnel Work in Higher Education** 3 crs.
Prq.: GC 530
An intensive introduction to the literature of student personnel and student development. Basic concepts, philosophies and current models, practices and issues in the field will be studied.

GC 552 The Role of the Counselor in the Community Agency 3 crs.

Prq.: GC 530

The role of the counselor in a variety of community settings will be examined. Theoretical orientation will be viewed in relation to the practical demands of community settings. Issues related to legislation, staffing, intake and referral, community liaison, funding and program evaluation will be discussed.

GC 553 Workshop in College Admissions 3 crs.

Prq.: GC 530

An introduction to the matters related to the transition of students to higher education. Specifically designed to allow the individual to experience and procure the necessary background to function as a Secondary School or College Admissions Counselor.

GC 554 Internship — School Guidance Counselor (N-9) 6 crs.

GC 555 Internship — School Guidance Counselor (5-12) 6 crs.

Prq.: Completion of 18 credits in the Counseling Program including all courses which include pre-practica field experiences

Candidates who do not hold Massachusetts classroom teacher certification and/or have one year full-time teaching experience or who are employed less than full-time, but at least one-fifth time in the role and at the level of the certificate desired, must complete a 300 clock hour internship within two calendar years. Students must register with the Program Coordinator by May 15 for the fall semester internship or by October 15 for the spring semester internship.

GC 556 Practicum — School Guidance Counselor (N-9) 6 crs.

GC 557 Practicum — School Guidance Counselor (5-12) 6 crs.

Prq.: 30 graduate credits in the Counseling Program including all Department Requirements. Candidates holding Massachusetts classroom teacher certification with one full year of teaching experience must complete a 150 clock hour practicum within one calendar year in the counseling role and at the level of the certificate desired. Supervision will be the joint responsibility of a member of the Counseling Program staff and a certified cooperating site practitioner. Students must register with the Program Coordinator by May 15 for the fall semester practicum and by October 15 for the spring semester practicum.

GC 558 Practicum — Agency Counselor 6 crs.

GC 559 Practicum — College Student Personnel 6 crs.

Prq.: 30 graduate credits in the Counseling Program including all Department Requirements. Candidates must complete a 150 clock hour practicum within one calendar year in a role and at a site approved by the Coordinator of the Counseling Program. Students must register with the Program Coordinator by May 15 for the fall semester practicum and by October 15 for the spring semester practicum.

GC 560 Special Topics in Counseling 3 crs.

Prq.: At least 9 hours in counseling or permission of the Instructor. (Course prerequisites may be specified depending upon the nature of the topic.)

Special topics of current relevance in counseling will be offered from time to time. The topic to be addressed will be announced in pre-registration publications. May be taken more than once with the consent of the advisor.

SCHOOL ADMINISTRATION

School Administration Committee

Professors: Adamson, Harper (Coordinator)

Associate Professor: Kelley

Assistant Professors: J. Jones, Wolpert

Staff: Haughey, Meaney, Sharples, Traw, Walsh

Programs leading to the Master of Education in School Administration and Certificate of Advanced Graduate Study (CAGS) in Education with an emphasis on School Administration are designed to prepare students for the following positions in school administration:

Supervisor/Director

Elementary School Principal

Middle School Principal

High School Principal

Superintendent/Assistant Superintendent

For CAGS details, consult the CAGS in Education section of this Catalogue.

It should be noted that the requirements for the certification of educational personnel in Massachusetts are being substantially modified. Students graduating after August, 1982, should consult with the Program Coordinator concerning the matter of certification and program requirements.

Master of Education in School Administration

A minimum of thirty-six approved graduate credits is required in this degree program. It should be understood that those who anticipate preparing for some of the above positions, such as a superintendency, should plan to do graduate work beyond the minimum.

Applicants are required to enroll in SA 510 Seminar on Educational Leadership for the Future (SELF) prior to any review of their application material. Only those who have completed one year of successful full-time teaching will be considered for admission to the program. Applicants must file the Graduate School form *Certificate of Teaching*.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue.

Students may choose one of five program options: Supervisor/Director, Elementary School Principal, Middle School Principal, High School Principal, or Superintendent/Assistant Superintendent. As part of their chosen program option, students must satisfactorily complete the following curriculum:

1. SA 510 Seminar on Educational Leadership for the Future (prior to admission) — 3 graduate credits.
2. Pre-practicum Requirements (including three field experiences):
 - A. Research Methods and Findings: GC 500 Research and Evaluation — 3 graduate credits
 - B. Humanistic and Behavioral Studies: ED 504 Humanistic and Behavioral Foundations of Education — 3 graduate credits.
 - C. Management and Leadership: SA 511 Educational Leadership and Managerial Effectiveness — 3 graduate credits
 - D. Supervision, Evaluation, and Development of Personnel and Programs: SA 564 Selection and Development of Educational Personnel — 3 graduate credits.
 - E. Human Relations, Communications, and Public Relations: SA 567 Human Concerns in the Schools — 3 graduate credits.
 - F. Curriculum Design and Evaluation, and Community Education: SA 578 Curriculum Improvement — 3 graduate credits.

continued next page

Elementary School Principal, Middle School Principal, High School Principal, and Superintendent/Assistant Superintendent program options only:

- G. Fiscal Planning and Budgeting: SA 565 School Finance and Business Administration — 2 graduate credits
- H. School Law and Labor Relations: SA 569 Legal Aspects of Educational Administration — 2 graduate credits
- I. Practical Application - one of the following three courses:
 - SA 561 Elementary School Administration — 3 graduate crs.
 - SA 563 Middle School Administration — 3 graduate crs.
 - SA 562 High School Administration — 3 graduate crs.
- 3. SA 568 Seminar in School Administration — 3 graduate credits.
- 4. Practicum or Internship (one of the following ten courses):
 - SA 583 Practicum in Supervisorship/Directorship, 6 crs.
 - SA 584 Practicum in Elementary School Principalship, 6 crs.
 - SA 585 Practicum in Middle School Principalship, 6 crs.
 - SA 586 Practicum in High School Principalship, 6 crs.
 - SA 587 Practicum in Superintendency/Assistant Superintendency, 6 crs.
 - SA 593 Supervisor/Director Internship, 6 crs.
 - SA 594 Elementary School Principal Internship, 6 crs.
 - SA 595 Middle School Principal Internship, 6 crs.
 - SA 596 High School Principal Internship, 6 crs.
 - SA 597 Superintendent/Assistant Superintendent Internship, 6 crs.

Upon completion of their program option, students seeking Massachusetts certification must possess a Massachusetts teacher's certificate and have had three years of employment in the role covered by that certificate.

Comprehensive examinations are given by the Committee during the months of November and April only. Students should consult the College Calendar in this catalogue for examination request deadlines.

For additional information relative to this program, students not yet accepted should consult with the Coordinator of the program.

COURSE OFFERINGS*

SA 503 Directed Study

3 crs.

Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

SA 510 Seminar on Educational Leadership for the Future

3 crs.

Designed to provide for individual self-appraisal, institutional assessment, and professional development planning. Offered as a series of six bi-weekly sessions using Friday evenings and Saturday mornings. Provides information on educational leadership and management concepts, situations, problems; provides an introduction to faculty and program; offers counseling assistance for career planning.

SA 511 Educational Leadership and Managerial Effectiveness

3 crs.

Prq.: SA 510 or permission of the Instructor

Facets of educational leadership and management involved in the effective development of programs designed to meet the needs of students, staff, and the community will be explored. Emphasis is on goal setting, establishing priorities, allocating resources, and facilitating the educational process in response to those needs. Students are expected to do in depth reading of recent research, particularly in the area of educational administration.

SA 559 Administration of Community Education Program

3 crs.

Prq.: SA 510 or permission of the Instructor

Development of an understanding of how administrators can develop a successful educational process in their neighborhood through community involvement and maximum facility planning.

SA 560 The American Public School Today

3 crs.

Prq.: ED 380, or ED 382, or ED 480, or permission of the Instructor

A survey of the principles of school organization and administration: program, pupil services, personnel, plant and equipment, and public relations. Emphasis is on common practice, issues and trends. Experience in staff participation through the use of the administrative process in class work and projects both individual and group.

SA 561 Elementary School Administration

3 crs.

SA 562 High School Administration

3 crs.

SA 563 Middle School Administration

3 crs.

Prq.: Completion of 15 credits applicable to the program

The application of the general principles of school administration to the specific problems of the elementary, middle, or high school. Emphasis is on the areas of curriculum development and program evaluation; personnel supervision and evaluation; goal setting, establishing priorities, allocating resources, facilitating the educational process in response to the needs of learners, teachers, and the community; school law; budgeting; plant management; community education; human concerns including dealing in an equitable, sensitive, and responsive manner with students, teachers, parents, and the community.

SA 564 Selection and Development of Educational Personnel

3 crs.

Prq.: SA 510 or permission of the Instructor

Staff selection and development will be studied including theories and techniques of supervision, evaluative procedures to assess the effectiveness of programs and personnel, organizational characteristics of schools and strategies for institutional change, inservice education, and personnel and program planning.

*See page 83 for general information regarding course offerings.

SA 565 School Finance and Business Administration

2 crs.

Prq.: SA 510 or permission of the Instructor

A study of the financial support for public schools from local, state, and federal governments. Fiscal planning, budgeting, plant management, state and municipal financing, accounting and purchasing procedures, distribution of supplies and services, transportation, and food service will receive attention.

SA 566 School Plant Planning and Administration

3 crs.

Prq.: SA 510 or permission of the Instructor

For the specialist in school administration who may ultimately go on to school district administration at the central office. A study of in-depth coordination of the many factors involved in planning, construction, maintaining and administering the modern school plant.

SA 567 Human Concerns in the Schools

3 crs.

Prq.: SA 510 or permission of the Instructor

A study of theory, research, and practice in the area of human relations in the school including public relations; clear and appropriate communication; and equitable, sensitive, and responsive relations with students, teachers, parents, and the community.

SA 568 Seminar in School Administration

3 crs.

Prq.: Completion of 24 credits applicable to the program

Study an analysis of current problems and issues in school administration. Offered as a series of six bi-weekly sessions using Friday evenings and Saturday mornings.

SA 569 Legal Aspects of School Administration

2 crs.

Prq.: SA 510 or permission of the Instructor

Legal rights, duties and liabilities of school personnel in general relationship to the school committee in Massachusetts will be studied. Intended for administrators, prospective administrators, and classroom teachers interested in the legal aspects of school committees, school property, teaching contracts, labor relations and collective bargaining, tenure, prevention of injury and accidents to students, relationships with parents, and a general survey of educational law cases at the local, state, and national levels.

**SA 571 Introduction to Theory and Understanding
of Group Interaction**

3 crs.

Prq.: SA 510 or permission of the Instructor

Directed to teachers and administrators who wish to be more effective in working with groups. Consideration will be given to the group process and staff development with emphasis on the human relations aspect of interpersonal relationships. Group activities will be based on improving understanding and utilization of skills in such areas as communication, cooperation, problem-solving, conflict management and decision-making.

SA 577 Education Systems Planning

3 crs.

Prq.: SA 510 or permission of the Instructor

The nature of educational planning in which the student becomes familiar with the process for translating local, state, and national policy in education into an operable organization plan. The course considers the historical and legal background for educational policy, the philosophy and elements of planning of educational innovation and reform so that the student may be able to develop educational plans.

SA 578 Curriculum Improvement

3 crs.

Prq.: SA 510 or permission of the Instructor

Contemporary theories of curriculum design and evaluation are explored. Students are expected to develop an eclectic approach to curriculum improvement based upon those theories and upon contemporary organizational factors, including leadership and management. Material is presented relating to developing community education programs, and to personnel and program planning.

SA 581-582 Administrator Extern Program I and II 3 crs. ea. semester

Prq.: Appointment as an administrator

A blend of on-the-job training with a seminar approach to administration that is largely self-directed, evolves from the problems of the individuals comprising the group, is informal and takes place in a setting removed from the distractions of everyday life, provides long uninterrupted periods for discussions and interaction of problem statements and of ideas shared in formal presentation.

SA 583 Practicum in Supervisorship/Directorship 6 crs.

SA 584 Practicum in Elementary School Principalship 6 crs.

SA 585 Practicum in Middle School Principalship 6 crs.

SA 586 Practicum in High School Principalship 6 crs.

SA 587 Practicum in Superintendency/Assistant Superintendency 6 crs.

Prq.: Completion of all pre-practicum credits applicable to the program

Assumption of administrative responsibility, in the role and at the level identified by the course title, in a school under the joint supervision of a practicing administrator in the role and at the level who is properly certified and tenure-experienced, and a faculty member from the College. Required a minimum of 150 clock hours (some of which could be after the school's classes are dismissed), 10 hours weekly for a semester of at least 15 weeks or 5 hours weekly for a school year of at least 30 weeks.

SA 593 Supervisor/Director Internship 6 crs.

SA 594 Elementary School Principal Internship 6 crs.

SA 595 Middle School Principal Internship 6 crs.

SA 596 High School Principal Internship 6 crs.

SA 597 Superintendent/Assistant Superintendent Internship 6 crs.

Prq.: Completion of one-half of the applicable pre-practicum courses

Employment less than full-time, but at least one-fifth time, in the role and at the level identified by the course title, in a school under appropriate school and college supervisors. Requires a minimum of 300 clock hours (some of which could be after the school's classes are dismissed), 10 hours weekly for a school year of at least 30 weeks for those students having substantial employment in the appropriate role and at the appropriate level or 5 hours weekly for two such school years for students having minimal employment in the role and at the level.

CERTIFICATE OF ADVANCED GRADUATE STUDY (CAGS) IN EDUCATION

The Division offers a program leading to a Certificate of Advanced Graduate Study (CAGS) in Education. This program is designed to meet the varied career needs of professionals who have earned an appropriate master's degree and who wish to develop greater leadership responsibilities and competence in a combination of areas in the field of education. In appropriate cases, students will be permitted to follow a program of study in their major area of interest which is designed to meet Massachusetts certification standards. Areas of study offered include counseling (school and community); early childhood education; elementary education; elementary school mathematics; health science; high school, middle school, and adult education; instructional media; physical education; reading; school administration; school librarianship; and special education.

Ordinarily, the applicant's master's degree must be in an area within the field of education. Applicants must demonstrate that they possess an academic and experiential background relevant to their field, and must indicate that their needs and goals are in accord with the objectives of the CAGS. In order to complete their application to the CAGS in Education program, students must enroll prior to program acceptance in ED 570 CAGS Seminar. The objectives of this required seminar are to allow for a professional assessment of the applicant on a personalized basis; to provide the student with a broad conceptualization of the field, as well as to focus the student's course of study on critical issues facing professionals in the field today; and to initiate individual program planning.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of the catalogue. CAGS credit requirements must be fulfilled by approved courses which clearly meet the student's academic and career needs. Appropriate course work offered outside of the Division will be permitted on a limited basis. In addition to ED 570 CAGS Seminar, all students will be required, near the completion of their CAGS program, to enroll in ED 581 CAGS Extern Program. The objective of this course is to help the student in a supportive environment enter into new leadership responsibilities making use of the knowledge and skills acquired in their CAGS program of study.

Additional information about the CAGS in Education, including application procedures and academic requirements, may be found in the

Graduate School section of this catalogue and by contacting the Head of the Professional Education Division.

COURSE OFFERINGS*

ED 570 CAGS Seminar

3 crs.

Designed to provide for individual self-appraisal, institutional assessment, and professional development planning. Provides a broad conceptualization of the field of education and educational leadership; addresses critical societal issues involving education today; focuses on faculty and course resources and the design of the applicant's proposed CAGS program, as influenced by the student's self-assessment and potential leadership responsibilities.

ED 581 CAGS Extern Program

3 crs.

A blend of on-the-job training with a seminar approach to leadership and problem solving that is largely self-directed, evolves from the problems of the individuals comprising the group, is informal, provides long uninterrupted periods for discussions and interaction of problem statements and of ideas shared in formal presentations.

*See page 83 for general information regarding course offerings.

Division of Social Sciences

Geography as Social Science, History, Political Science and Economics

Division Head: Professor Jordan D. Fiore

UNDERGRADUATE PROGRAMS

The Division of Social Sciences offers majors in history and political science. There is no major in economics but majors in history and political science are encouraged to select courses in economics and geography to enrich their programs in the area of the Social Sciences.

Students majoring in political science who plan to teach may combine electives in history and education and thus obtain certification in history and the Social Sciences.

GRADUATE PROGRAMS

At the graduate level the Master of Arts degree is offered in the field of history. The degree of Master of Arts in Teaching is offered in history and social sciences.

DIVISIONAL COURSE OFFERINGS

SS 300 Geography and History of Mexico

3 crs.

The history of colonial New Spain and modern Mexico, focusing on the relationship of the physical environment to the culture of the indigenous population of the Spanish contributions in the development of the nation.

Geography as Social Science

The faculty and other courses of the Department of Earth Sciences and Geography are listed under the Division of Natural Sciences and Mathematics.

GS 110 The Cultural Environment

3 crs.

A study of the distribution of cultural landscapes as interacting with human activities, especially the way in which the spread of people and ideas modify, and are shaped by, the physical world.

GS 115 Map Skills for the Citizen

1 cr.

This course will introduce various types of maps, air photos and related graphics. It aims at developing skills for the use of maps in everyday life and in certain career fields. Map types included are: topographic maps, property maps, maps used by the local government, marine charts, maps of recreational areas and road maps. One two hour period per week.

GS 150 Geographic Approach to Social Science

3 crs.

The interpretation of maps, globes and graphs as the basis for inferences about social phenomena and problems. This course has been developed in cooperation with Elementary Education Department and is of special interest for future elementary school social studies teachers. *Does not satisfy GER.*

GS 210 War/Peace

3 crs.

An introduction to open-ended research and discussion to discover non-lethal resolution of conflicts between groups of human beings in a finite world.

GS 252 Geography of Anglo-America

3 crs.

Prq.: GE 100 or 120

A description and analysis of the relationships between relevant physical and cultural features of regions in the United States and Canada.

GS 261-262 World Regional Geography I-II

3 crs. for each semester

Geographical context of current social, economic and political problems in Europe, the U.S.S.R., the Orient, the Middle East, the Pacific World, Africa, Latin America and Anglo-America. Geographical features characteristic of each country and their relationship to a functioning political and economic unit. Either semester may be taken independently.

*See page 83 for general information regarding course offerings.

SS 300 Geography and History of Mexico

3 crs.

The history of colonial New Spain and modern Mexico, focusing on the relationship of the physical environment to the culture of the indigenous population of the Spanish contributions in the development of the nation.

GS 353 Urban Geography

3 crs.

Prq.: GS 110 or consent of the instructor

The geographic aspects of the city including location, function, land use patterns, and interaction. Field work focuses on current problems facing urban life.

GS 358 Geography of Latin America

3 crs.

Prq.: GE 100 or 120 or GS 110

Physical and cultural patterns of selected countries of South America. Emphasis on current economic and political problems.

GS 362 Economic Geography

3 crs.

Prq.: Consent of the Instructor

Simple models and frameworks of the various ways in which man organizes his economic activity. Problems of spatial structure, arrangements and patterns of economic activity.

GS 404 Geography of the U.S.S.R.

3 crs.

Prq.: GE 100 or 120 or GS 110

The geography of environment, resources and population are studied in relation to history and the present economic and social system of the Soviet Union.

GS 450 Geography of Agriculture and Food Production

3 crs.

Prq.: GE 100 or 120 or consent of the Instructor

A study of food producing capabilities of different climatic environments, technologies, and management systems throughout the world, via case study approach.

GS 451 Geography of Europe

3 crs.

Prq.: GE 100 or GS 110 or consent of the Instructor

The character of the natural and cultural environments of the geographic regions of Europe.

GS 452 Geography of Asia

3 crs.

Prq.: GE 100 or GS 110 or consent of the Instructor

The physical and cultural patterns of selected countries of Asia.

GS 453 Geography of Canada

3 crs.

Prq.: GE 100 or GS 110 or consent of the Instructor

The geography of environment, resources and population are examined in relation to history, economic, and regional land patterns of Canada.

GS 461 Geography of Africa

3 crs.

Prq.: GE 100 or 120 or GS 110

The physical and cultural features of the African continent with special reference to the emerged political and regional patterns.

GS 470 Historical Geography of New England

3 crs.

Prq.: Consent of the Instructor

This course traces the evolution of the geographic patterns of settlement, land use, and cultural and economic development from the pre-European period to the present.

GS 473 Political Geography

3 crs.

Prq.: Consent of the Instructor

Variation of politically organized areas and their relationship to each other. Political behavior from the viewpoint of ethology i.e. territoriality and aggression.

Department of History

Professor Thomas Turner, Chairperson
Professors: William Cole, Gerald Doiron,
Jordan Fiore, Jane Herrick, Donald Keay, Dennis Lythgoe
Lucille O'Connell, Philip Silvia, Jr., Benjamin Spence
Associate Professors: David Culver, Chester Nowak,
Arthur Oien, Alfred Wolff, Jr.
Assistant Professors: Peter Karavites
John F. Myers, Jean Stonehouse

UNDERGRADUATE PROGRAM

Bachelor of Arts

The objectives of the department are to contribute to the general education program by offering history courses to all students; to prepare students planning to teach history and to offer advanced courses to those majoring in the elementary curriculum to enable them to enrich their teaching at that level; to enable students to do graduate or associated work in the field of history.

The department recommends that its majors select a minor or interdisciplinary program which will complement the major program. History majors electing Secondary Education are strongly urged to take elective courses in geography, political science, economics and the behavioral sciences in order to meet present employment expectations.

Only 6 hours of 100-level courses may be applied toward a history major or minor.

History Major

Any two 100-level courses in sequence (If HI 123-124 are elected, an additional course in the period before 1500 must be taken);
HI 221-222, plus 9 additional credits in U.S. History; 9 credits in non-U.S. History;
6 additional credits from any area;
All majors must select one of the several senior seminars offered;
Successful completion of a one year sequence in foreign language at the intermediate level, or its equivalent.

History Major/High School Education

History (Teacher of History 9-12)

Major courses:

Two sequential 100 level courses, HI 221, HI 222, one 300-400 level course from Area II — Ancient, one 300-400 level course from Area IV — European, three 300-400 level courses from Area V — United States, one course from Area VI — Regional, HI 492, one 300-400 level course from Area VIII — Relationship, or one course from among the following (ID 200, ID 210, ID 220, ID 420, SS 300).

Cognate courses: None

History (Teacher of Social Studies 9-12)

Major courses:

Two sequential 100 level courses, HI 221, HI 222, two 300-400 level courses in United States History, two 300-400 level courses in non-United States History, HI 492.

Cognate courses:

PO 272, PO 277 or PO 360, EC 200, EC 320, SO 202, GS 110, one elective course in Political Science or Geography as a Social Science, one regional Geography course in Geography as a Social Science, one course in Philosophy or Religion.

History Minor

18 hours including the freshmen and sophomore sequences. At least 6 credits must be in the 300 and 400-level.

GRADUATE PROGRAMS

Master of Arts

The Department of History offers a program leading to the degree of Master of Arts in History, which is designed to prepare qualified students for research, further graduate study and teaching. An undergraduate major in history, or its equivalent, is normally required for admission to this program. Applicants must have an interview with the Coordinator of the Program. No application will be considered unless this requirement has been met.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisor and Program Planning" in the Graduate School section of this catalogue. History courses offered for the degree should be elected in accordance with the "Group" and "Area" distribution format outlined below. The comprehensive examination will be given in the "groups" and "areas" selected by the candidate. These exams will be given in the fall and spring only. In the Master of Arts program the student should elect as one of his first courses HI 501 Seminar in Historical Methodology, unless his advisor agrees that he has met the requirement in an appropriate undergraduate course. At least one 500 level seminar is also required. All Master of Arts candidates must complete a thesis. Any student who does not complete his thesis in two semesters must continue to select HI 502 Research each semester until the thesis is completed.

The department's course offerings include the following which may not be taken for graduate credit: all courses numbered in the 100 and 200 levels, HI 498, HI 499.

Master of Arts in Teaching

The Department also offers a program leading to the degree of Master of Arts in Teaching with a concentration in history, which is designed primarily to meet the varied needs of graduate students who are currently teaching or intend to teach at the secondary school level. Degree requirements include a minimum of 12 appropriate graduate credits in designated areas of professional study (consult the Graduate School section of this catalogue), and a minimum of 18 appropriate graduate credits in history (approved by the program advisor on the basis of the background, interests, and needs of the student), including at least one 500 level seminar.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this

catalogue. History courses offered for the degree should be elected in accordance with the "Group" and "Area" distribution format outlined below. The comprehensive examination will be given in the "groups" and "areas" selected by the candidate. These exams will be given in the fall and spring only.

The department plays a major role in the MAT program in Social Sciences.

The department's course offerings include the following which may not be taken for graduate credit: all courses numbered in the 100 and 200 levels, HI 498, HI 499.

Graduate Programs by Areas

Each student entering a graduate program in history will choose one of the four groups listed below as his major. Each student will choose two areas within the chosen major group, and one additional area from within one of the remaining groups. Students majoring in Group II, III, or IV must choose their additional area within the History of the United States.

Upon entering the program, students will fill out a departmental form in which they declare their choice of areas. Students may change their areas any time up to their comprehensive examination.

The graduate program in history is divided in four major Groups:

- I. United States and Canada
- II. Europe
- III. Latin America
- IV. Asia and Africa

Group I: United States and Canada

Areas:

- 1. Chronological period, 1607-1787
- 2. Chronological period, 1787-1877
- 3. Chronological period, 1877 to present
- 4. Regional and Topical

Students choosing the "Regional and Topical Area" can propose their own area for examination, in consultation with the advisor and with the approval of the Department's Graduate Committee.

- 5. Canada

Group II: Europe

Areas:

- 1. Ancient Greece and Rome
- 2. Middle Ages and Renaissance
- 3. Early Modern and Revolutionary Europe
- 4. 19th and 20th Century Europe
- 5. Russia and Eastern Europe

Group III: Latin America

Areas:

1. Pre-Columbian and Colonial Spanish America
2. National Period
3. Brazil

Group IV: Asia and Africa

Areas:

1. Ancient Middle East
2. Middle East since Mohammed
3. Colonial Africa
4. Modern Africa
5. South Asia and India
6. Traditional China and Japan to 1860
7. Modern China and Japan since 1860

COURSE OFFERINGS*

The object of the 100-level courses is to give a broad introduction to history at the college level. They should be taken in sequence. Courses that overlap in time periods may not be both taken for credit. Possible sequence include:

HI 111-112

HI 121-122-123-124

HI 111-123-124

HI 121-122-112

HI 111 Western Civilization to 1715

3 crs.

An historical survey of developments which have molded our culture from ancient times to the establishment of absolutism.

HI 112 Western Civilization since 1715

3 crs.

Continuation of the survey begun in HI 111 down to contemporary times.

HI 121 World Civilization I: Ancient

3 crs.

Prehistoric man and the various ancient civilizations to the decline of the Roman empire in the West; Ancient Near East; Classical Greece and Rome; Far East; and the Western Hemisphere.

HI 122 World Civilization II: Medieval

3 crs.

From the decline of the Roman Empire to the beginning of the Renaissance: Western Christian Civilization; Byzantine culture; Islam; other African and Asian peoples.

HI 123 World Civilization III: Early Modern

3 crs.

From the Renaissance to the end of the Napoleonic Era: the rise of national states; the mutual impact of East and West.

HI 124 World Civilization IV: Modern

3 crs.

From 1815 to the present: the zenith of European power and nation-building in Asia, Africa, and Latin America.

HI 221 United States History and Constitutions to 1865

3 crs.

Development of the nation from the age of exploration to the end of the Civil War.

HI 222 United States History since 1865

3 crs.

Continues the study begun in HI 221 down to the present.

*See page 83 for general information regarding course offerings.

300 and 400-level courses in history are designed primarily for juniors and seniors. As a minimum preparation, those taking upper level courses in European, Asian, African, and Latin American history must have completed 3 credits in either Western Civilization or World Civilization. Those taking upper level courses in U.S. or Canadian history must have completed either HI 221 or HI 222. Exceptions to these requirements must be approved by the Department.

HI 301 The Ancient World: Near East **3 crs.**
From prehistoric times through the Persian Empire.

HI 302 Jews and Christians in the Ancient Roman World **3 crs.**
The history of the Jews and Christians with emphasis on the relationships with the Roman authorities and people.

HI 303 Ancient Greece and the Hellenistic Age **3 crs.**
An historical survey of Ancient Greece and a comprehensive study of the cultural contributions of the Greeks to western civilization.

HI 304 The Ancient World: Rome **3 crs.**
From its beginnings to the barbarian invasions.

HI 305 Europe in the Middle Ages **3 crs.**
From the fall of Rome to the Renaissance.

HI 306 The Renaissance and the Reformation **3 crs.**
Western Europe from the decline of feudal institutions to the emergence of the modern state system, with emphasis on cultural and intellectual affairs.

HI 309 Nineteenth Century Europe **3 crs.**
From the Napoleonic era to the eve of the First World War.

HI 310 Twentieth Century Europe **3 crs.**
Particular focus on backgrounds, development, and effects of the two world wars.

HI 311 English History to 1603 **3 crs.**
From Roman times to the accession of the Stuart dynasty.

HI 313 British History since 1603 **3 crs.**
England and her empire to 1815 with stress on parallel developments in American history, including economic and social factors.

HI 314 British Empire and Commonwealth since 1815 **3 crs.**
Political development to the present with emphasis on the rise and fall of the Second Empire.

HI 315 Louis XIV and the Age of Absolutism **3 crs.**
A history of Europe from the end of the Thirty Years' War to the French Revolution with emphasis on the political, social, scientific, religious, literary, and artistic achievements during the period.

HI 316 The French Revolution and the Napoleonic Era **3 crs.**
France from the Old Regime to the end of the First Empire.

- HI 317 Modern France** **3 crs.**
From the Revolution of 1789 to the present.
- HI 318 History of East-Central Europe since 1918** **3 crs.**
The political, social, economic, cultural, and intellectual history of Austria, Hungary, Czechoslovakia, and Poland during the interwar period--and that of the Socialist Republics (Hungary, Czechoslovakia, Poland, and East Germany) from the Second World War to the present.
- HI 319 Modern Russia to 1917** **3 crs.**
Political, social, and economic factors in the history of Russia from the end of the fifteenth century to the Revolution.
- HI 320 History of the U.S.S.R.** **3 crs.**
The political, social, intellectual, and diplomatic development of Russia.
- HI 321 Modern German History** **3 crs.**
From the reign of Frederick the Great to the end of World War II.
- HI 322 History of Portugal** **3 crs.**
From the eleventh century to the dissolution of the Portuguese empire in the twentieth century.
- HI 323 Intellectual History of Modern Europe** **3 crs.**
From the Renaissance to the present.
- HI 324 History of the Middle East** **3 crs.**
From Mohammed to the present: The Arab Empire, the Ottoman Empire, and the roots of the Arab-Israeli dilemma.
- HI 326 The Arab-Israeli Conflict** **3 crs.**
Zionism and Arab nationalism from the nineteenth century to the present with emphasis on the root causes of the present conflict.
- HI 328 Modern European Imperialism** **3 crs.**
Africa and Asia considered as contrasting phases of European expansion in the nineteenth and twentieth centuries.
- HI 329 Africa since 1800** **3 crs.**
The impact of Islamic and European cultures on the peoples of Africa; creation of colonial empires.
- HI 333 Spanish America: The Colonial Period** **3 crs.**
Indigenous peoples of the area; exploration and conquest; institutional development of the empire to the revolts against Spain in the nineteenth century.
- HI 334 Spanish America: The National Period** **3 crs.**
From the revolutions against Spain to the present. Concentration on Mexico and two or three other states.
- HI 335 Canadian History to Confederation** **3 crs.**
The land, the native peoples, exploration, patterns of settlement of the French through the Conquest to the development of English institutions.

- HI 336 Canadian History since Confederation** **3 crs.**
The evolution of an independent Canada from the time of the Confederation.
- HI 337 History of Canadian-American Relations** **3 crs.**
An analysis of the Canadian efforts to remain friendly with the giant to the south while protecting its political, economic and cultural integrity.
- HI 342 Topics in Recent American History** **3 crs.**
The isolationism and boom of the 1920's, the New Deal, World War II, and the postwar period.
- HI 343 History of American Indians** **3 crs.**
The history of American Indians to the twentieth century, emphasizing the role of economic, political, and military conflict with the people and government of the United States.
- HI 345 American Immigration and Ethnicity** **3 crs.**
Patterns of migration to the United States with particular emphasis on the nineteenth and twentieth centuries.
- HI 346 American Labor History** **3 crs.**
The pre-industry and industrial periods. Emphasis on the reciprocal relations of workingmen, Negroes, immigrants, urbanization, and industrialization.
- HI 347 History of the American City** **3 crs.**
Political, architectural, economic, social, cultural, and population factors in the growth and development of American cities since colonial times.
- HI 348 Afro-American History** **3 crs.**
From the colonial period through the present.
- HI 349 Women in American History** **3 crs.**
A history of American women from the colonial period to the present time.
- HI 351 The American West** **3 crs.**
The westward movement, emphasizing the distinctive character of that region in its economic, social, political, and intellectual life.
- HI 352 The American South** **3 crs.**
Sectionalism; its causes and consequences; factors which made the South distinctive; emphasis on race relations, the Civil War and Reconstruction, agrarianism, industrialization.
- HI 359 New England Textile Communities:
Social and Economic History** **3 crs.**
Social history emphasizing economic, ethnic, labor, political and religious factors during a period when the New England region achieved ascendancy as the nation's foremost cotton textile area.
- HI 360 American Environmental History** **3 crs.**
Man's attitude toward, interaction with, and adaptations to the physical environment of the United States.
- HI 361 American Economic History** **3 crs.**
Economic development of the United States with particular emphasis on the period of industrial development.

HI 362 Constitutional History of the United States 3 crs.

Historical development of the U.S. Constitution.

HI 363 Social and Intellectual History of the U.S. to 1870 3 crs.

Economic, social, and cultural development to the end of the Civil War.

HI 365 Social and Intellectual History of the United States 1870-1914 3 crs.

The economic, social, and cultural development from 1870 to the eve of the First World War, with emphasis on the transformation from an agricultural to an industrial society.

HI 366 Social and Intellectual History of the U.S. since 1914 3 crs.

Economic, social, and cultural developments since 1914, with emphasis on the transformation of American life through such forces as technology, population trends, and the mass-production and mass-consumption economy.

HI 368 American Political History 3 crs.

American History in political perspective: special emphasis on parties, primaries, campaigns, elections; the Presidency; personality in politics; machine politics; political institutions; corruption from U.S. Grant to Watergate.

HI 371 United States Foreign Relations to 1900 3 crs.

From the American Revolution to 1900.

HI 372 United States Foreign Relations since 1900 3 crs.

HI 375 History of Science 3 crs.

A comprehensive presentation of the History of Science and its impact on man and society from the Greeks to the present.

HI 381 United States History: The Colonial Period 1607-1763 3 crs.

The settlement and growth of the English colonies of America; England's colonial policies; economic and institutional development in the provincial period; the wars with the Indians, and the rivalry with the French in America.

HI 382 The American Revolution 1763-1787 3 crs.

Background and causes of the American Revolution, the military, social, political, and diplomatic aspects of the Revolution. The government under the Articles of Confederation, and the problems engendered by the attainment of political independence.

HI 383 United States History: The Early National Period 3 crs.

The course of United States History from the establishment of the republic to the election of Andrew Jackson.

HI 384 Jacksonian Democracy and the Coming of the Civil War 3 crs.

The election of Andrew Jackson and the "rise of the common man," the Whig-Democrat rivalry, the Texas question, Manifest Destiny, the rise of abolitionism, the events leading to the outbreak of the Civil War.

HI 385 United States History: The Civil War **3 crs.**

Background and causes of the Civil War, the military and naval aspects. Civil War music, art, and literature, diplomacy of the Civil War, the home front in the war, the plans for reconstruction, and military reconstruction.

HI 386 United States History: 1865-1900 **3 crs.**

Emphasis on Reconstruction, Populism and Bryan, The Gilded Age and Cleveland, McKinley and imperialism.

HI 387 United States History: Progressive Era **3 crs.**

The rise of the Progressive movement in American history to the early 1920's as reflected in politics, government, and the social and intellectual life of the era.

HI 388 United States History from World War I **3 crs.**

Development of the modern America through the isolationism and boom of the 1920's, the Great Depression, the New Deal, World War II, and the role of the United States in the post-war world.

HI 391 History of China **3 crs.**

From prehistoric times to the present with particular emphasis on intellectual and cultural development.

HI 392 History of Japan **3 crs.**

From prehistoric times to the present with emphasis on the development of social, political and economic institutions.

HI 393 South Asia: The Modern Period **3 crs.**

Emphasis on colonialism and nationalism in the Indian subcontinent and Vietnam.

HI 394 China under Communism **3 crs.**

The origins of the Chinese Communist Party and the political, social, economic, and intellectual changes fostered by the party since 1949.

HI 395 World War II **3 crs.**

A study of the global conflict with emphasis on military diplomatic, and political events.

HI 397 Historiography **3 crs.**

Prq.: Consent of the department chairperson and the Instructor

Writings of major historians; evaluation through professional journals and book reviews.

Enrollment limited to fifteen. Students are expected to elect HI 398.

HI 398 Study and Writing of History **3 crs.**

Prq.: Consent of the Instructor

The techniques of historical research and preparation of papers requiring such techniques; analysis and evaluation of source materials.

HI 400 Topics in Non-U.S. History **2-3 crs.**

Varied topics such as World War II; South Asia; Ancient Egypt. Meets 4 hours weekly for one quarter.

HI 440 Topics in U.S. History **2-3 crs.**

Varied topics such as the French in New England; History of Boston. Meets 4 hours weekly for one quarter.

HI 461 History of Massachusetts **3 crs.**

From the days of the Pilgrims and Puritans to the present. In the modern period, emphasis is on social, economic and constitutional history.

HI 464 Contemporary Affairs

3 crs.

National and international problems, using magazines, newspapers, telecasts, and recent books. Political, economic, social, and scientific developments. Enrollment limited to fifteen.

HI 492 Senior Seminar in History

3 crs.

Prq.: Consent of the department chairperson and the Instructor

Each senior will elect a seminar. A research paper is required. The number of students in each is limited.

HI 497 Historical Museum Management

2 crs.

4 periods weekly for one quarter.

HI 498 Internship in History

3-6 crs.

Prq.: Consent of the Department

Intended to expose student participants to historical artifacts and primary source materials. Host agencies may include museums and public and private historical organizations.

HI 499 Directed Study in History

1-3 crs.

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits or with an internship program — combined credit maximum, 6.

HI 501 Seminar in Historical Methodology

3 crs.

Prq.: Acceptance in a master's degree program at Bridgewater State College

The basic methods of historical research and historical writing and the proper use of primary and secondary sources, bibliography, documentation, and annotation.

HI 502 Research

credit to be arranged

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this Catalogue.

HI 503 Directed Study

credit to be arranged

Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

HI 505 History of the American Sciences

3 crs.

The role of science, leading American scientists, and the formation of major scientific organizations and government scientific agencies in American history.

HI 521 Pilgrim Heritage Seminar

3 crs.

The Pilgrims in their economic, social, and religious setting. Admission only with the consent of the Instructor.

HI 540 Topical Seminar: United States and Canada

3 crs.

Prq.: Permission of the Instructor

This course will stress reading and research in a limited field. Topics will vary each time the course is given and will be announced in the horarium. Limited enrollment.

HI 550 Topical Seminar: Europe

3 crs.

Prq.: Two appropriate European history courses and permission of the Instructor

This course will stress reading and research in a limited field. Topics will vary each time the course is given and will be announced in the horarium. Limited enrollment.

HI 560 Topical Seminar: Latin America

3 crs.

Prq.: HI 333 and HI 334 or equivalents

This course will stress reading and research in a limited field. Topics will vary each time the course is given and will be announced in the horarium. Limited enrollment.

HI 570 Topical Seminar: Africa

3 crs.

Prq.: HI 329 or equivalent

This course will stress reading and research in a limited field. Topics will vary each time the course is given and will be announced in the horarium. Limited enrollment.

The following courses also carry credit in history:

ID 200 Introduction to Canadian Studies

ID 210 Introduction to Middle East Studies

ID 220 Introduction to American Studies

ID 420 American Studies Seminar

SS 300 Geography and History of Mexico



A Bridgewater classroom of the 1890's. 365

Department of Political Science and Economics

Associate Professor Michael Kryzanek, Chairperson
Professors: Walter Adamson, Robert Larson
Assistant Professor: Guy Clifford
Instructor: Pauline Harrington
Assistant Professor of Economics: Stanley Antoniotti

POLITICAL SCIENCE UNDERGRADUATE PROGRAMS

Bachelor of Arts/Bachelor of Science

The program of study for political science majors is designed to give students an understanding of the political and governmental structure in their own country and in other parts of the world, and to develop their interest in contemporary public affairs and governmental problems. The political science major aims to provide a foundation for the study of law, for graduate work in political science or public administration with a view toward teaching or government service, and for work in international relations.

The political science major with a concentration in public administration is designed for students who look forward to careers in the public service after graduation, and for those who wish to pursue graduate studies, particularly studies toward a master's degree in public administration.

The political science major with a concentration in international affairs is designed for those students who wish a general background in and understanding of this field for purposes of cultural enhancement and/or career orientation, looking towards further study leading to service in the international field as a professional opportunity.

Political Science Major

PO 272, PO 277, PO 371, PO 372, PO 373, PO 374, PO 375, PO 473, plus 3 additional 300 or 400-level courses;

EC 200, EC 320;

HI 111-112, HI 221-222, HI 314 and one additional history course;

A one-year sequence of foreign language study at the intermediate level, or its equivalent.

Public Administration Concentration

PO 272, PO 277, PO 360, PO 372, PO 373, PO 374, PO 379, PO 389, PO 390, PO 498; HI 111-112, HI 221-222, HI 314;

AC 240-241, CC 200, EN 201, MA 110 or CS 100, and EC 200;

A one-year sequence of foreign language study at the intermediate level, or its equivalent.

International Affairs Concentration

PO 271, PO 272, PO 360, PO 371, PO 379, PO 384, PO 475 or PO 498, plus four additional political science courses; HI 111-112, HI 221-222, HI 314;

CC 200, EC 200, EC 320, EN 201, GS 261 or 262, MA 110 or 190;

A one-year sequence of foreign language study at the intermediate level, or its equivalent.

Political Science Minor

PO 272, PO 277, PO 360, PO 371, PO 379;

PO 382 or 386 or 387;

PO 271 or 373 or 374.

POLITICAL SCIENCE GRADUATE PROGRAM

The Department of Political Science and Economics does not offer a program at the master's degree level at this time. Political Science courses may be taken, with faculty advisor approval, in a program leading to the degree of Master of Arts in Teaching with a concentration in the social sciences. Detailed information regarding this degree may be found in the Graduate School section of this catalogue.

The departmental offerings listed below include the following courses which may not be taken for graduate credit: all courses below the 300-level, PO 498, PO 499.

COURSE OFFERINGS*

- PO 100 Introduction to Politics** **3 crs.**
An introduction to the world of politics with emphasis on a presentation of the essential concepts, philosophies, processes and problems of politics in contemporary society.
- PO 271 Western Political Thought — Plato to the Present** **3 crs.**
Development of political ideas from ancient times to the modern era.
- PO 272 American Government: The Federal System** **3 crs.**
The constitutional authority, organization, activities, and political processes of the national government.
- PO 273 U.S. and Massachusetts Constitutions** **1 cr.**
Structure of government and rights and responsibilities according to Federal and Commonwealth constitutions.
- PO 277 American Government: State and Local Government** **3 crs.**
Prq.: PO 272 or consent of the Instructor
State government and politics with emphasis on Massachusetts affairs.
- PO 360 International Relations** **3 crs.**
Prq.: PO 272 or consent of the Instructor
An introduction to modern world politics, the nation-state system and the patterns and processes involved in relations within the international community.
- PO 371 Comparative Government** **3 crs.**
Prq.: PO 272, PO 277
Political behavior and government systems in Great Britain, France, the Soviet Union, etc.
- PO 372 Legislative Process and Procedure** **3 crs.**
Prq.: PO 272, PO 277
The role of legislatures in modern American government, federal and state; the relationships of the voter and of apportionment to law-making; the two-party system and its impact on the lawmaking process; the committee system and seniority, and constitutional limitations on legislatures.
- PO 373 Political Theory — Ancient and Medieval** **3 crs.**
Prq.: PO 272
Western political thought from Plato to Sir Thomas More. Emphasis upon the basic concepts and persistent questions of political theory and their relevance to contemporary problems through systematic analysis of major works. May not be taken if credit already received for PO 271.
- PO 374 Political Thought: Modern and Contemporary** **3 crs.**
Prq.: PO 272
The ideas of major political thinkers in the era of the modern nation-state. May not be taken if credit already received for PO 271.
- PO 375 Political Parties** **3 crs.**
Prq.: PO 272, PO 277
The historical development of the American party system, and contemporary aspects of its functioning, at the national, state, and local level.

*See page 83 for general information regarding course offerings.

PO 376 Municipal Government

3 crs.

Prq.: PO 272, PO 277

Study of selected problems of structure, organization, and powers of local government; intergovernmental relationships; administrative and personnel management; special emphasis on local government in Massachusetts.

PO 379 Introduction to Public Administration

3 crs.

Prq.: PO 272, PO 277

The relationship of the administrative branch of government to other branches in the making and implementation of public policy; theories of government organization for efficient administration; problems of budgeting, personnel, merit systems, type of agency organization, popular control over the bureaucracy.

PO 381 United States — Latin American Relations

3 crs.

Prq.: PO 272, PO 360

The evolution and current status of the political, economic and strategic relationship between the United States and the Latin American nations.

PO 382 Latin American Government and Politics

3 crs.

Prq.: PO 272, PO 371

A survey of the current governing structures and the general political conditions in the major Latin American nations.

PO 383 Comparative Political Systems

3 crs.

Prq.: PO 272, PO 371

An advanced investigation and comparison of the primary political institutions and processes found in a number of contemporary national systems. Special emphasis to be placed on the role and status of constitutions, interest groups, political parties, policy-making bodies and other areas.

PO 384 United States Foreign Policy Since World War II

3 crs.

Prq.: Junior status and permission of the Instructor

The study of the goals, policies, structures and procedures that have formed and guided the relations of the United States with other world powers since the conclusion of World War II.

PO 385 Law for the Layman

3 crs.

A non-technical discussion of legal topics, including the relationship of law to social and humanitarian problems; open to majors and non-majors.

PO 386 Canadian Government

3 crs.

Prq.: PO 272, and PO 371 or permission of the Instructor

The origins and development of the government of Canada from Confederation; the transition from colonial to dominion status; the Statute of Westminster, and independence. Federal government organization, relations with the British Commonwealth.

PO 387 Government and Politics of Africa

3 crs.

Prq.: PO 272 and PO 371, or consent of the Instructor

An introduction to the organization and processes of African politics centering on the political evolution of contemporary Africa in general but with specific attention to selected nations as appropriate.

PO 389 Public Personnel Administration

3 crs.

Prq.: PO 379 or consent of the Instructor

Employee relations in the public service; recruitment, testing, compensation, training, classification, and promotions of public servants.

PO 390 Public Finance

3 crs.

Prq.: PO 379 or consent of the Instructor

The role of government in a market economy; the role of taxation in a market economy; principles of taxation; problems of budgeting, government expenditure and debt, and economic growth.

PO 461 Contemporary International Relations

2 or 3 crs.

Prq.: PO 360 or consent of the Instructor

Application of the techniques of analysis, simulation and forecasting to international relations situations, problems and current issues.

PO 472 American Constitutional Development

3 crs.

Prq.: PO 272, PO 277, PO 374

Principles and concepts of the U.S. Constitution, as revealed in leading court decisions. Judicial review, federalism, separation of powers, implied powers, due process of law, equal protection, the contract clause, etc.

PO 473 International Law and Organization

3 crs.

Prq.: Permission of the Instructor

The evolution of international law and organization from early beginnings to the United Nations systems; the principles of international law and organization, their integration, and the effect of international politics thereon; the theoretical and practical aspects of the international legal process; the structure, functions and procedures of the United Nations, etc.

PO 475 Senior Seminar in Political Science

3 crs.

Prq.: Admission is subject to the consent of the department Chairperson and the Instructor

The undertaking of independent study, and a research project presented in oral and written form.

PO 479 Public Policy

3 crs.

Prq.: PO 379

A systematic study of theory and practice in the making and the execution of public policy including the factors of public demand on the political system; decision-making in the public sector; tools and techniques for implementation and evaluation; and the import for future planning.

PO 498 Internship in Political Science

3-15 crs.

Prq.: Consent of the department chairperson

A non-classroom experience intended to complement the academic preparation of a limited number of juniors and seniors majoring in political science. Placements are in areas such as federal, state, city, and town governments and private interest groups.

PO 499 Directed Study in Political Science

1-3 crs.

Prq.: Consent of the department chairperson

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

PO 502 Research

credit to be arranged

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

PO 503 Directed Study

credit to be arranged

Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

PO 510 Graduate Seminar in American Politics

3 crs.

Prq.: Substantial background in political science and consent of the Instructor

An in-depth study of current issues, problems and trends in American Politics.

PO 520 Graduate Seminar in International Relations 3 crs.

Prq.: Substantial background in political science and consent of the instructor
An in-depth study of current issues, problems and trends in international relations.

PO 530 Graduate Seminar in Comparative Politics 3 crs.

Prq.: Substantial background in political science and consent of the Instructor
An in-depth study of current issues, problems and trends in comparative politics with special emphasis on the post-industrial state.

PO 540 Graduate Seminar in Current Topics of Public Administration 3 crs.

Prq.: Substantial background in political science and consent of the instructor
An advanced approach to recent developments in public administration, public policy and human resource management.

PO 550 Graduate Seminar in Massachusetts State Government 3 crs.

Prq.: Substantial background in political science and consent of the Instructor
A detailed survey of the current state of the Commonwealth with particular emphasis on key public policy areas.

PO 560 Graduate Seminar on the American Presidency 3 crs.

Prq.: Substantial background in political science and consent of the Instructor
A detailed examination of the current conditions of the American presidency.

ECONOMICS UNDERGRADUATE PROGRAM

The department offers the courses listed below for undergraduates majoring in other areas who wish to include economics electives in their program.

ECONOMICS GRADUATE PROGRAM

The Department of Political Science and Economics does not offer a program at the master's degree level in Economics. Economics courses may be taken, with faculty advisor approval, in a program leading to the degree of Master of Arts in Teaching with a concentration in social sciences. Detailed information regarding this degree may be found in the Graduate School section of this catalogue as well as under the Division of Social Sciences.

The departmental offerings listed below include the following courses which may not be taken for graduate credit: EC 200, EC 499, AC 240-AC 241.

COURSE OFFERINGS*

ECONOMICS

EC 200 Economic Principles and Problems 3 crs.

A discussion of the basic principles of micro and macro economics. Emphasis is placed on the application of theory to solving the problems of the free enterprise system.

EC 300 Intermediate Micro Economic Theory and Policy 3 crs.

Prq.: EC 200 or permission of the Instructor

The theory of consumer behavior and demand, production and cost; the firm and market organization are discussed with emphasis placed on practical applications.

EC 310 Intermediate Macro Economic Theory 3 crs.

Prq.: EC 200 or consent of the Instructor

Keynesian, post Keynesian and Monetary models of the economy are used in detail. Emphasis is placed on the application of theory to all Macro-economic problems.

EC 315 Money and Banking 3 crs.

Prq.: EC 200 or consent of the Instructor

The roles and functions of money and the banking system are discussed. Various theories and policies are discussed and their influence on the state of the economy.

*See page 83 for general information regarding course offerings.

EC 320 Comparative Economic Systems **3 crs.**

A study of philosophical and structural foundations of capitalism and democratic socialism. Emphasis is placed on a comparison of the American economy to the economies of other countries.

EC 321 International Economics **3 crs.**

Prq.: EC 200 or consent of the Instructor

A study of pure trade theory and its application to solving policy problems. Topics include Balance of Trade, Balance of Payments and Monetary Systems.

EC 400 History of Economic Thought **3 crs.**

Prq.: EC 200, EC 300, EC 315, and consent of the Instructor

The writings of the major economic thinkers from Ancient Greece to Modern times will be covered. Included will be discussions of the works of Plato, Adam Smith, Marshall, Keynes and others.

EC 499 Directed Study in Economics **1-3 crs.**

Prq.: Consent of the Department

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits.

EC 502 Research **credit to be arranged**

Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

EC 503 Directed Study **credit to be arranged**

Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

EC 510 Graduate Seminar in Domestic Economic Problems **3 crs.**

Prq.: Consent of the Instructor

Group discussion and individual research on problems of the American economy.

EC 520 Graduate Seminar in International Economic Problems **3 crs.**

Prq.: Consent of the Instructor

Group discussion and individual research on the problems of the world economy.

EC 531 Economics for Elementary Teachers **3 crs.**

Prq.: A bachelor's degree and some background in Elementary Education

The development of economic programs and units for the elementary student in an area of interest, from materials and sources introduced in the course.

EC 532 Economics for Secondary Teachers **3 crs.**

Prq.: A bachelor's degree and some background in Education

The development of economic programs and units for the secondary student in an area of interest from materials and sources introduced in the course.

ACCOUNTING

AC 240 Accounting I **3 crs.**

Preparation of accounting statements; cash receivables, liabilities and inventory valuation; corporate financial reporting. Does not satisfy GER's.

AC 241 Accounting II

3 crs.

Prq.: AC 240

Investments, fund and cash flow analysis, budgetary control, introduction to cost accounting.
Does not satisfy GER's.

Undergraduate Multidisciplinary & Pre-Professional Programs

AMERICAN STUDIES MINOR

Designed to complement the student's major, this minor program examines the development of American society and culture from several perspectives. It features a study of the United States through a combination of relevant courses in a variety of academic areas: history, literature, art and architecture, philosophy, religion, political science and others. Through its multidisciplinary focus, the minor encourages an integrated and inclusive sense of the American experience.

The area around Bridgewater is rich in library and museum resources for American Studies. In addition to the holdings of Boston area colleges and universities, there are the collections of the Massachusetts Historical Society, the Pilgrim Museum, Plimouth Plantation, the Whaling Museum in New Bedford, the Brockton Art Center, the Boston and Providence Athenaeums, the John Carter Brown Library and the Harris Collection at Brown University. Bridgewater itself has the new Microbook Library of American Civilization and the PCMI humanities collection.

A student wishing to pursue a minor in American Studies will ordinarily be assigned an advisor from the American Studies Committee, and will be expected to take the following sequence of courses in the sophomore, junior and senior years:

ID 220 Introduction to American Studies

3 crs.

Sophomores should enroll in this interdisciplinary course which is the initial course for the minor in American Studies. The course aims to examine from several perspectives one problem or period in the American experience. The topic, to be announced before registration, changes from year to year. Disciplines involved include: English, history, art, philosophy, political science and others.

ID 420 American Studies Seminar

3 crs.

Interdisciplinary topics, which change from year to year, will be developed in a small group, seminar setting. Juniors and seniors in the program will enroll in this seminar twice, studying two different topics. Total of 6 hours.

ELECTIVE COURSES: In consultation with an American Studies advisor, the student will choose a group of at least FOUR (4) additional courses in fields related to the program. Most likely these courses will be spread over the junior and senior years. At least TWO (2) of these additional courses must be chosen from disciplines outside the student's major.

For further information, interested students should contact Professors Charles Fanning or Joseph Yokelson of the English Department.

CANADIAN STUDIES MINOR

The minor has been developed as an area studies in response to faculty, student and regional interest. The national origins of a large portion of the population of Southeastern Massachusetts reflects strong Canadian ties from both the French and English communities.

The program is designed to supplement and give a multi-cultural dimension to one's major by an in-depth study of our northern neighbor. The study is presented in the following academic areas: history, literature (English and French), geography, music, education and political science.

Students may enter the Canadian Studies minor during the sophomore or junior years and will be assigned an advisor in their major fields, usually a member of the College Council for Canadian Studies.

ID 200 An Introduction to Canadian Studies

3 crs.

An interdisciplinary course which acts as the initial course for the general student and for those wishing to pursue a track in Canadian Studies. The following areas are included: anthropology, art, economics, education, English, French, geography, government, history, music, religion, sociology and theatre.

In addition to **ID 200, An Introduction to Canadian Studies**, students in the program should select courses from those listed below.

- I. Three courses with one from each area:
 1. Area of literature
 - EN 283 Major Canadian Writers in English I
 - EN 284 Major Canadian Writers in English II
 - LF 261 Introduction to the Civilization and Language of French Canada
 2. Area of history
 - HI 335 Canadian History to Confederation
 - HI 336 Canadian History since Confederation
 3. Area of geography or political science
 - GS 453 Geography of Canada
 - PO 386 Government of Canada
- II. Two additional courses selected from the following list:
 - EN 384 Modern Canadian Fiction in English
 - LF 261 Introduction to the Civilization and Language of French Canada
 - GS 453 Geography of Canada
 - HI 335 Canadian History to Confederation
 - PO 386 Government of Canada
 - MU 368 Folk Music of Canada
 - ED 384 Canadian Education Seminar

III. One additional course may be selected from courses in Group III or from the following:

- | | |
|--------|--|
| EN 384 | Modern Canadian Fiction in English |
| EN 385 | Canadian Poetry in English |
| HI 337 | History of Canadian-American Relations |
| LF 211 | Twentieth-Century French Canadian Writers |
| LF 222 | Introduction to French-Canadian Literature |

Total of 21 credit hours.

Students in the minor are encouraged to have some familiarity with French as their language.

For further details contact Professor John Myers of the History Department.

CHEMISTRY/GEOLOGY MAJOR

A major in Chemistry-Geology is offered jointly by the Department of Chemical Sciences and the Department of Earth Sciences and Geography. This program is designed to prepare students for graduate school and professional employment in geo-chemistry and geology. Careers in these fields may involve petroleum, mineral and groundwater exploration, or research in geochronology, mineralogy, crystallography and oceanography. This major is particularly suited to students interested in chemical or geological oceanography. The program is flexible in that it allows the student to specialize in a variety of areas by suitable choice of electives.

Chemistry-Geology majors are required to take the following courses: CH 141-142 (or CH 131-132); ES 100, 101, 372. In addition to the above requirements, majors must elect a minimum of two additional semesters of chemistry, two semesters of physics, and two semesters of mathematics. In addition to these electives the student must elect a minimum of six hours of chemistry or earth sciences or mathematics or physics which have been approved by the student's advisor.

The Chemistry-Geology major at Bridgewater State College is recognized by the New England Student Regional Program as an undergraduate four-year degree opportunity for residents of New England. Students who are legal residents of Connecticut, Maine, New Hampshire, Rhode Island, and Vermont and are accepted for study in this major will pay only the in-state tuition rate.

LINGUISTICS MINOR

The linguistics minor is open to all students, but it is especially valuable as a support to majors in anthropology, communication arts and sciences, early childhood education, elementary education, special education, English, foreign languages, philosophy, and psychology.

A minor in linguistics may be earned by selecting eighteen credits from the courses listed below. EN 323, Introduction to Linguistics, is required and should be taken as early in the student's program as possible. Also, students must reach an intermediate competency in a foreign language or take FL 300, Languages of the World.

Psycho-Socio Linguistics

- | | |
|--------|-------------------------------------|
| CC 363 | Interpreting Communicative Behavior |
| CC 450 | Communicative Theory |
| CC 442 | Dactylology |

General Linguistics

- | | |
|--------|--|
| EN 324 | Linguistic History of the English Language |
| EN 320 | Chaucer |
| EN 430 | Comparative Grammar |
| EN 435 | Semantics |
| LF 201 | French Literature of the Middle Ages |
| LF 381 | Applied French Linguistics and Phonetics |
| LS 381 | The Middle Ages I |
| PL 405 | Philosophy of Language |
| EN 440 | Topics in Linguistics |
| FL 300 | Languages of the World |

Applied Linguistics

- | | |
|--------|--------------------------------------|
| CD 291 | Phonetics |
| CD 292 | Language Acquisition and Development |
| HU 330 | English as a Second Language |
| PL 240 | Rational Thinking |

For further details contact Dr. Donald Johnson, Chairperson, Department of English.

OCEANOGRAPHY

The program in oceanography is offered as a cooperative effort of all departments within the Division of Natural Sciences and Mathematics, with the assistance of the staff and facilities of the Woods Hole Oceanographic Institute. This program is designed to prepare students for graduate school or professional employment in oceanography. Bridgewater State College

participates in the annual summer Marine Science Program at the Massachusetts Maritime Academy. Summer programs at the Academy allow the student to participate in course work in specialized areas of oceanography, to engage in research and to gain experience in actual field techniques on board ship. Participation in this program provides the student with the necessary foundation for either further academic work in oceanography or employment in a variety of areas.

Most graduate schools of oceanography require an undergraduate major in biology, chemistry, earth sciences, or physics. All students interested in an oceanography program should major in one of these disciplines. Graduate schools of oceanography expect students to include the following courses in their undergraduate programs: Calculus I and II, Inorganic Chemistry and Qualitative Analysis or General Chemistry, General Physics or Elements of Physics. Quantitative Analysis, General Botany, General Zoology, Physical Geology, and Introduction to Oceanography I and II.

These courses, together with one of the majors indicated above, provide the basic foundation for further study in one of the four principle branches of oceanography, i.e.: biological oceanography, chemical oceanography, geological oceanography, and physical oceanography. Additional courses in related areas may be selected by the student with the approval of his major advisor. A student who is interested in oceanography should consult both his major advisor and one of the oceanography advisors before registering for courses in their freshman year or as soon as possible thereafter. Oceanography advisors are: Dr. Robert Boutilier (Earth Sciences); Dr. Henry Daley (Chemistry); Dr. John Jahoda (Biology).

PRE-MEDICAL, PRE-DENTAL, PRE-VETERINARY

Pre-professional training for students planning to enter medical, dental or veterinary schools is provided by Bridgewater State College. Such professional schools generally prefer applicants with a strong liberal arts background. They expect prospective students to have demonstrated competency in their undergraduate major, proficiency in writing, and skill in a wide range of laboratory techniques. Courses in biology, chemistry, mathematics and physics ordinarily are required. While some medical, dental and veterinary schools indicate that they do not require a specific undergraduate major, students are advised to major in either biology or chemistry. Students who have a major in biology and a major in chemistry (double major) receive excellent preparation for admission to these professional schools.

Students who are interested in medical, dental, or veterinary school should consult with one of the Pre-medical, Pre-dental, Pre-veterinary

advisors before registering for courses in their freshman year or as soon as possible thereafter. Pre-medical, Pre-dental and Pre-veterinary advisors are: Dr. Kenneth J. Howe (Coordinator); Dr. Wilmon Chipman (Chemistry); Dr. Walter Morin (Biology).

PROGRAM IN SCIENTIFIC and TECHNICAL ILLUSTRATION

This program is offered as a cooperative effort of the Division of Natural Sciences & Mathematics and Department of Art. It provides a basis for careers in Scientific & Technical Illustrations. Students interested in this program should major in either Art, one of the Natural Sciences or Mathematics. All students in this program are expected to take the following courses: AR 120 Basic Design, AR 220 Drawing I, AR 230 Painting I, AR 240 Sculpture I, AR 320 Drawing II, AR 499 (1 cr.) Directed Study. Students majoring in Art must minor in one of the Natural Sciences or Mathematics. It is strongly recommended that all students in this program take at least one course in each of the Natural Sciences and Mathematics. In addition to their regular advisors (majors and minors), students are encouraged to consult with members of the Scientific and Technical Illustration Committee. Members of this committee include Professor Hugo D'Alarcao and Professor Stephen Smalley.

RADIO and TELEVISION OPERATION AND PRODUCTION MINOR

A joint program for a minor in Radio/Television, developed by the Departments of Speech Communication, Theatre Arts, and Communication Disorders and Media and Librarianship, for those students who have an active interest in the areas of Radio and/or Television. The two departments share responsibility in advising students who choose the Radio/Television minor. Practical application of the theories learned in class are an essential element of the program.

- EN 280 Journalism
- CC 210 Voice and Diction
- or
- CC 215 Speech for Radio and Television
- CC 450 Communicative Theory
- ME 456 Radio and TV Production I
- ME 458 Radio and TV Production II
- ME 460 Graphics for Instructional Media

COGNATE COURSES

- CC 486 Mass Communication in Society
- ME 452 Basic Photography
- ME 454 Script Writing Techniques for Radio and Television
- 498 Internship

RUSSIAN AND EAST EUROPEAN STUDIES MINOR

A multidisciplinary minor encompassing 18 credit hours to be selected from courses offered in the Departments of English, Foreign Languages, Earth Sciences and Geography, History, and Political Science and Economics. The major purpose of this minor is to provide students with a deeper understanding of the Eastern European area (including Russia) and its culture.

Each student must achieve proficiency in the Russian Language (up to the intermediate level), but only 6 credits can be applied to the Area Program - or - any other Slavic Language. Each requirement can be met by CLEP.

Three credits of each subject taken within the Slavic Area Studies can also be applied to student's major.

Students participating in the Program are encouraged to go beyond the minimum requirements and take additional General Education Electives in this area.

Additional courses can be taken, with the approval of the Slavic Council, at other Massachusetts State Colleges and colleges cooperating in the Sachem Program.

Each student who completes the program will be credited with a Minor in the area, and in addition will receive a "Certificate of Completing Area Studies: Slavic."

The requirements for the minor include:

- LR 151-152 Intermediate Russian I-II
- HI 318 History of East-Central Europe since 1918
- or
- HI 319 Modern Russia to 1917
- or
- HI 320 History of the USSR
- GS 404 Geography of the USSR

Select two of the following courses:

- EC 320 Comparative Economic Systems
- PO 371 Comparative Government
- PO 383 Comparative Political Systems

For further details contact Dr. Chester Nowak of the History Department.

URBAN AFFAIRS MINOR

The College offers a multidisciplinary minor in Urban Affairs under the auspices of the departments of Earth Sciences and Geography, History, Political Science and Economics, Psychology, and Sociology and Anthropology. A major purpose of this minor is to provide students with a broader understanding and sensitivity of the complex problems facing the urban environment through the combined efforts of different disciplines of the College. The minor, through its internship program, is designed to provide students with an opportunity for direct contact and work in fields such as urban planning, urban government, social welfare, social psychology, and urban education.

Some examples of internships which are assigned according to the abilities, interests, and background of the student, and the current needs of the cooperating communities or agencies, are:

Through the Department of Earth Sciences and Geography

City and regional planning; Economic development — Land use; Environmental protection; Transportation studies; Cartography — drafting; Business — bank locations and market studies.

Through the Department of History

Internships working with historical affairs commissions; assisting community organizations in oral history projects, and writing about local history.

Through the Division of Behavioral Sciences

Work in human services agencies; Survey research in public institutions; Work in community organizations and voluntary agencies.

Option A

Students may choose four out of the following six courses:

- AN 307 Urban Cultural Dynamics
- HI 347 History of the American City
- PY 210 Applied Social Psychology
- GS 353 Urban Geography
- SO 306 Urban Sociology
- PO 376 Municipal Government

Internship: (6) credits. (Equal to 8 weeks, full time or 16 weeks half time)

Option B

Students may choose four out of the six courses listed under Option A, plus two courses from the list below:

- GE 354 Field Methods in Urban Geography
- HI 346 American Labor History
- PO 277 State and Local Government
- SO 312 Minority Relations
- SW 325 Community Organization
- 499 Directed study in individual participating departments

Courses taken to satisfy requirements of a major may not be counted in the minor. Students interested in this program are encouraged to take their General Education electives in the area of minority studies.

Students interested in this program should contact:

1. Professor Robert Dillman, Department of Earth Sciences & Geography
2. Professor Clay Greene, Department of Sociology and Anthropology.
3. Professor Lucille O'Connell, Department of History

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NOTES

NOTES

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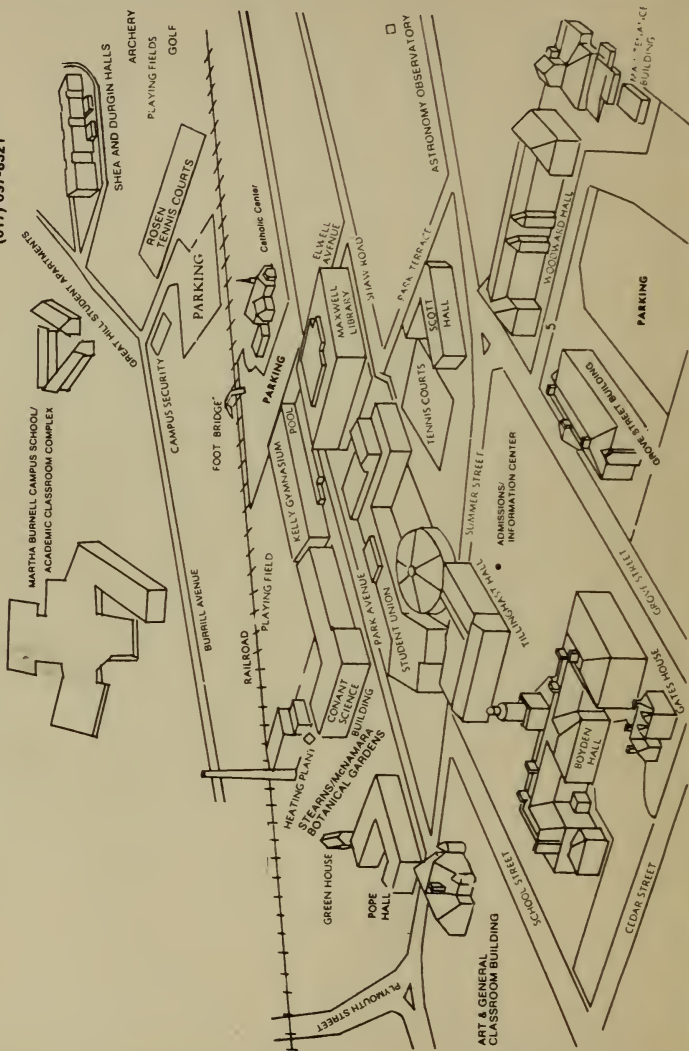
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Catalogues should be addressed to the Director of Admissions or the Office of the Graduate School.

Continuing Education brochures should be addressed to the Continuing Education Program.

Transcripts

Students who hold a bachelor's and/or a master's degree from this college should write to the Registrar.

Students who have not completed their bachelor's degree should write to the Registrar for a transcript of courses taken through the Day Session, and to the Dean of the Continuing Education Program for a transcript of courses taken through the Continuing Education Program.

Students who have not completed their master's degree at Bridgewater State College should write to the Dean of the Continuing Education Program for a transcript of courses taken. There is a charge of \$1.00 per transcript.

Inquiries concerning:

Admission to the undergraduate day school should be made to the Director of Admissions.

Health services, housing, loans, and scholarships should be addressed to the Vice-President, Student Services.

The summer session of Bridgewater State College should be addressed to the Dean of the Continuing Education Program.

The summer session at Hyannis should be addressed to the Director of the Hyannis Summer Session.

The Graduate School should be addressed to the Dean of Graduate and Continuing Education.

Placement should be addressed to the Director of Placement.

Continuing Education should be addressed to the Dean of Continuing Education.

Financial Aid should be addressed to the Director of Financial Aid.

Alumni Affairs should be addressed to the Alumni Office.

Academic employment should be addressed to the chairperson of the appropriate academic department.

Non-academic employment should be addressed to the Director of Personnel.

Teacher certification should be addressed to the Director of Teacher Certification, Department of Education, 31 St. James Avenue, Boston, Massachusetts 02116.

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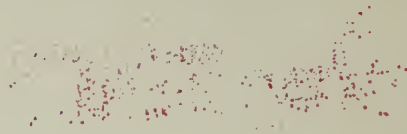
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